

GOVERNMENT OF INDIA
DEPARTMENT OF ARCHAEOLOGY
**CENTRAL ARCHAEOLOGICAL
LIBRARY**

CLASS _____

CALL NO. 635.9/Bca _____

D.G.A. 79.

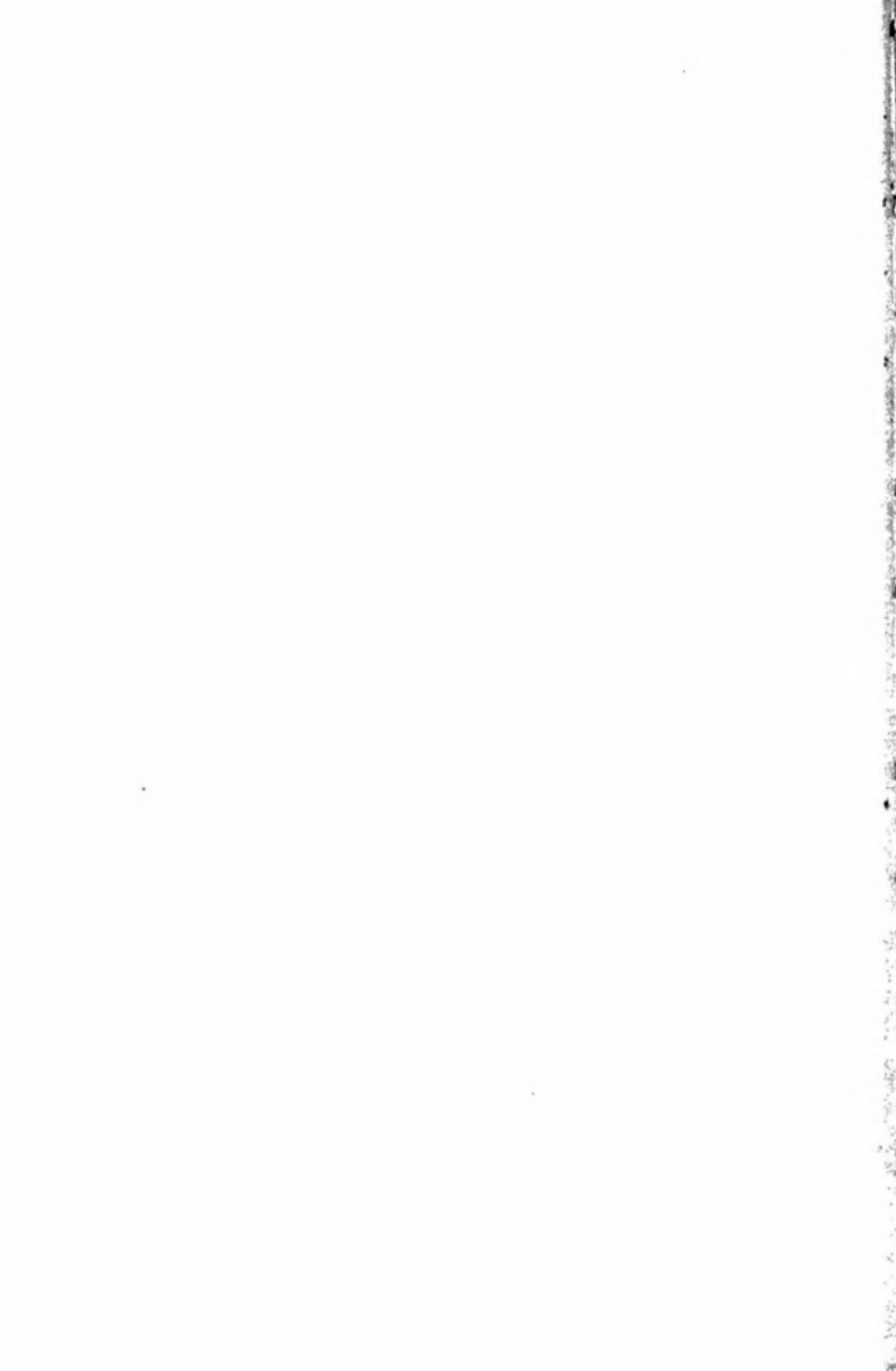
P.C. 3

~~18/2/53~~

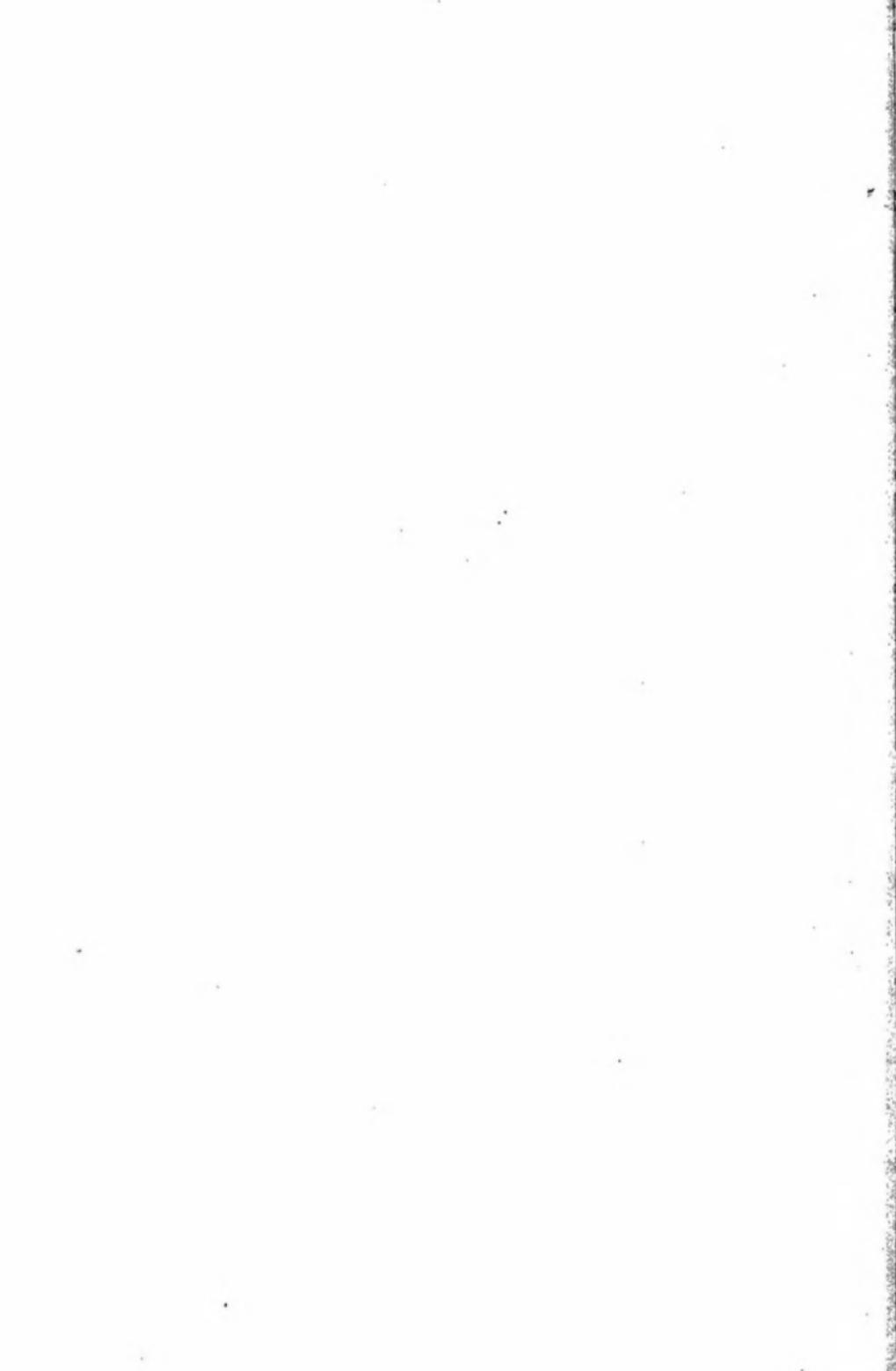
Central
The Indian Post
Communication
NEW DELHI.







WALL SHRUBS AND HARDY CLIMBERS



WALL SHRUBS AND HARDY CLIMBERS



By

W. J. BEAN, C.V.O., I.S.O., V.M.H.

*Late Curator Royal Botanic
Gardens, Kew*

43835

635.97635
Bea

PUTNAM · LONDON
42 GREAT RUSSELL STREET, W.C.I

*First published April, 1939
Reprinted March 1945
Reprinted October 1946*

CENTRAL ARCHAEOLOGICAL
LIBRARY, NEW DELHI.

Acc. No 19085.....

Date 14.1.53.....

Call No

CENTRAL ARCHAEOLOGICAL LIBRARY, NEW DELHI.

Acc. No 109.....

Date 14.2.1951.....

Call No 635.9 / Bca.....

CONTENTS

PART I. INTRODUCTION

I: CULTIVATION

The Value of Walls	3
Shrubs or Climbers	4
Soil and Root Conditions	5

II: METHODS OF SUPPORT

Natural Means	7
Artificial Means	7
Open Spaces	8
Pergolas	9
<i>Construction</i>	10
<i>Furnishing</i>	11
<i>Shrubs for Uprights</i>	11
<i>Climbers for Uprights</i>	12

III: PRUNING

Purpose of Pruning	13
Time for Pruning	14

ILLUSTRATIONS

	<i>Facing page</i>
<i>Lathyrus pubescens</i>	103
<i>Leptospermum scoparium</i>	102
<i>Lonicera japonica</i>	18
<i>Magnolia grandiflora, &c.</i>	116
<i>Mutisia retusa</i>	117
<i>Myrtus Communis</i>	13
<i>Osmanthus Delavayi</i>	126
<i>Passiflora coerulea</i>	127
<i>Phygelius capensis</i>	111
<i>Pileostegia viburnoides</i>	129
<i>Polygonum baldschuanicum</i>	132
<i>Prunus triloba plena</i>	133
<i>Punica granatum</i>	135
<i>Pyracantha coccinea</i>	23, 134
<i>Rogersiana</i>	138
<i>Rosa Banksiae</i>	139
<i>Rose Pergola at Kew</i>	10
<i>Schizophragma integrifolia</i>	152
<i>Solanum crispum</i>	153
<i>Trachelospermum asiaticum</i>	162
<i>Veronica Hulkeana</i>	12
<i>Viburnum rhytidophyllum</i>	163
<i>Vines at Aldenham</i>	168
<i>Wistaria chinensis</i>	169
<i>on old Oak Tree</i>	II

PREFACE

It is believed that the following pages afford a more comprehensive review of the subject they deal with than has hitherto been offered to the gardening public; but even then it has been difficult to decide where to draw the line in regard to selection of species. The term "average climate" which is frequently used, may be taken as applying roughly to the area between the southern borders of Surrey and the Trent. The cultivation of wall shrubs is a very different matter in the north-eastern parts of Britain from what it is in the south-west. There are places in the latter region like Penzance, the Lizard, or the Scilly Isles, where such a large proportion of what are commonly known as greenhouse plants could be cultivated with the aid of walls that it would be impossible to include a consideration of them here within reasonable limits. Nor is it really essential. On the other hand, there are localities in the north and east where plants which are perfectly satisfactory when grown near London in the open air, need the protection of a wall to show them at their best. Excursions in the book have very frequently been made to these more outlying localities but the bulk of it has, perforce, been written with a view to our "average climate".

Of the larger genera like *Vitis* and *Clematis* I have made mention of no more than a selection of the more ornamental kinds. A very considerable proportion of the species of *Vitis* resemble each other so closely in general characters that it is scarcely worth while to deal with them in their entirety, so long as the various sections of the genus are represented. And of the sixty or so species of *Clematis* in cultivation a

PREFACE

great number have little interest for the ordinary cultivator as apart from connoisseurs and those with purely botanical tastes. But I have, on the other hand, for the sake of comprehensiveness, attempted to give some account, however brief, of *all the genera* of hardy climbers, although a few of them contain no species of great merit. It is useful sometimes to know what to avoid.

The greater part of the illustrations have been made from photographs supplied by Messrs. Malby & Co., but others have been obtained from the collection at Kew done by the late Mr. E. J. Wallis. For the beautiful picture of a wistaria growing over an oak at Tittenhurst I am indebted to the kindness of Mrs. Mosenthal.

W. J. B.

Kew,
March, 1939.

PART I
INTRODUCTION



Part I

INTRODUCTION

I: CULTIVATION

The Value of Walls. The great value of walls for the cultivation of shrubs consists in their providing more favourable conditions for species of interest and beauty which are too tender for the fully open ground. They are also useful for bringing out the best qualities of other species which, whilst perfectly hardy, flower indifferently or not at all without the ripening and fertilizing influences of walls. Even in the fruit garden, as every gardener knows, there are varieties of pear and plum whose natural fertility in our climate can only be fully developed with the aid of sunny walls.

The walls of every cottage, however humble, or even of every shed or outhouse, provide sites on which many beautiful plants may be established, assuming space can be found for a few cubit feet of soil at the base. There are, of course, in big cities and manufacturing towns, sites where the atmosphere is so contaminated by soot or sulphurous fumes, or so hemmed in by tall buildings and other structures, that healthy shrub life becomes impossible. Especially does this apply to plants with evergreen foliage. But there are multitudes of walls, especially in suburban districts, where these evil conditions are very much mitigated or even absent, and it is to the dwellers in these places that it is hoped the following pages may afford a choice of suitable wall plants. To those who live in quite rural localities, the opportunities for cultivating the rarer and more exquisite species hereafter described are much more numerous. It is hoped therefore

WALL SHRUBS AND HARDY CLIMBERS

that this work may find appreciation not only in places where wall space is plentiful, but in humbler establishments as well.

It need not be emphasized how much the dull monotony of many suburban streets could be relieved by planting ornamental shrubs or climbers there. One often sees what must be regarded as a waste of good opportunities when open, airy walls are covered with ordinary ivy. There are, of course, many unsightly or otherwise objectionable buildings for which, if a covering is needed at all, ivy is the best for the purpose. Especially is this the case when it is desirable to cover and hide them completely from top to bottom. But if a house is reasonably attractive, it is preferable, I consider, not to attempt to shroud it entirely with vegetation. In the majority of cases, those shrubs or climbers are most suitable (also more convenient to manage) that do not reach beyond the windows of the first floor. And for beautiful Tudor or Elizabethan houses it will often be desirable to keep the vegetation still lower. In this connection the chapters on "House Climbers", "Low Shrubs", "Wall Plants for Narrow Spaces" and "Shrubs and Climbers for North Walls" may be consulted.

Shrubs or Climbers. On the whole climbers, more especially the vigorous ones, cannot be considered as satisfactory as shrubs for furnishing walls of moderate height with vegetation. Most of them have too strong a tendency to reach the top and leave the lower parts of the wall bare. They may, in fact, sometimes be used to train along the top of the wall and leave the lower spaces for shrubs. The wistaria is a useful example for this purpose for it is only by careful training and pruning from the start that it can be made satisfactorily to furnish a wall from the bottom upwards. The same remark applies equally well to the vines (*Vitis*) although they are easier to prune and train. I have seen, for

CULTIVATION

example, the fine autumn-tinted one (*V. Coignetiae*) trained to cover a wall space 12 feet square as effectively as a wall pear tree. It is achieved by encouraging the plant to develop lateral branches and only allowing it to increase in height as this is done. Nothing more, really, than a development of the system commonly practised for roof-trained grape vines.

But as has already been indicated, the supreme value of walls is not in providing accommodation for climbers, but in affording conditions that enable very many beautiful shrubs to be successfully grown that are hopelessly tender in the open ground. This is mainly due to the protection they give from fiercely cold winds, which, even on fully exposed walls, have not the same chilling effects as they have when they can blow through a plant. To a considerable extent also the advantages they confer must be ascribed to their heat-reflecting and heat-retaining properties, which in late summer and autumn help to ripen and harden the growths.

Soil and Root Conditions. Climbers or shrubs grown on ordinary boundary walls, especially where a border of herbaceous plants or vegetables exists in front of them, will need as a rule no provision of new soil. But before planting against the walls of houses or other buildings with a gravelled or paved path so close to them that little or no space for soil is left, they must be furnished with a suitable amount of good soil. A space 1½ to 2 feet wide and as much deep, should if possible be left clear at the base of the wall. Once they have got a satisfactory start there, the roots will spread under gravelled or even flagged walks quite happily. Nothing is so generally suitable for wall shrubs as a loamy soil, preferably of a free open nature as against a heavy one; and if it can have mixed with it a modicum of decayed leaves so much the better. Provided the soil is not permeated with lime or chalk this mixture will suit pretty well everything, even naturally peat-loving species. Roses like a heavyish soil.

WALL SHRUBS AND CLIMBERS

Plants growing against walls do not seem to be affected by droughty summer weather so much as those growing fully in the open, but for newly planted ones a mulching of straw manure is beneficial in dry times.

Aspect. As a general rule, plants growing against walls, with the exception of the few that definitely prefer shade, succeed about equally well with either an eastern, a western, or a southern exposure. In the following pages, where no mention is made of a plant's preference for a particular aspect, it may be inferred that any of the three will prove to be suitable. At the same time, if it were possible to choose one's own wall I would always select one facing south, for it is there that the beneficial influences of sunshine are afforded in greatest degree. Next to a southern wall I would prefer a western one, because our afternoons, taking the year round, are sunnier than the mornings. Probably also, a western wall has its virtues increased by coming under the influence of the accumulated heat of the day.

For plants that blossom in early spring before we are free from late frosts, an eastern-facing wall is less satisfactory. Many flowers will bear a degree or two of frost without injury if they can thaw slowly and naturally. But if a late frost is followed, as it frequently is, by bright early sunshine, the same flowers under a rapid thawing may be spoilt. For such plants, consequently, the cool morning shade provided by a western wall will often be advantageous. This, however, must not deter anyone who has an eastern wall available from planting freely against it, although some discretion may be used in selecting those plants that bloom after March or early April.

North walls are, of course, least satisfactory of all and comparatively few climbers or shrubs prefer them. (See p. 21 for notes and list of climbers and shrubs.)

II: METHODS OF SUPPORT

Natural Means. The means by which climbers support themselves in nature are various and interesting. Thus we find decurved or hooked spines as in the roses, aerial roots as in the ivy, curling or adhesively-tipped tendrils as in vines, a twining habit as in wistaria and common jasmine, a curling of the leafstalk round available support as in the clematises, and a prolongation of the main stalk of the leaf into a curling tendril as in the mutisias. Tropical climbers have several variants of these methods which need not be considered here. Some plants of climbing habit, usually of very vigorous growth, like *Solanum crispum*, thrust themselves through, or simply sprawl over, other shrubs; or like the honeysuckle, use their twining powers to reach the sunlight and then spread themselves over their host. It is interesting to note that (and difficult to explain why) some twiners like the "Dutchman's pipe" invariably twist clockwise, whilst others, like the perfoliate woodbine (*Lonicera Caprifolium*), as invariably twist in the other direction, or counter clockwise. As noted above, the tendril bearers have two types of tendrils, one in which they coil round whatever support is within their grasp as does the common grape vine (*Vitis vinifera*); and those that have a viscous disk at the end which enables them, octopus like, to cling to flat or flattish surfaces as does the true Virginian creeper (*Vitis quinquefolia*). The latter, as well as the aerial rooters, are of especial value for covering lofty walls and other flat surfaces without artificial aid.

Artificial Means of Support. The methods of supporting shrubs and climbers on walls require some consideration. Those climbers, like the ivy and ampelopsis, which are

WALL SHRUBS AND CLIMBERS

provided with aerial roots, are usually self-supporting, and although newly planted ones may need to have their loose shoots tied or nailed to the wall at first, they give no trouble when once established. The oldest and commonest method, especially on boundary walls, outhouses, &c., of brick, is to use nails; and for the purpose a specially stout type is manufactured. Strips of cloth for enclosing the shoot are obtainable from tailors' clippings, or they can be purchased already cut for use. But there is naturally a strong objection to using nails on the walls of dwelling houses or important buildings where their continued use loosens the mortar and may eventually give the bricks a pock-marked appearance. Nailing is also unsatisfactory for stone walls where the mortar lines are far apart. In such cases the usual and most satisfactory means of support is to string the wall horizontally with stoutish galvanized wires about 8 inches apart, held in place by hooked or eyelet-holed metal pins driven into the walls. Twining climbers are not as a rule suitable for buildings but where they are planted a vertical stringing is preferable.

In the case of low shrubs such as may be suitable for planting beneath windows, strips of wire netting loosely attached to the wall afford a cheap and ready means of support, even if somewhat temporary. It must be remembered that many shrubs as, for example, cydonias and pyracanthas, build up in a few years a rigid stem and branches stiff enough to become self-supporting.

A lattice work of narrow laths painted green is sometimes used to avoid damage to walls by nails or even eyeleted pins, but this of course can only be regarded as a temporary measure, although it may be serviceable long enough to enable wall shrubs to fill the allotted space and become self-supporting.

Open Spaces. Where there are no walls, pergolas, or trees on

METHODS OF SUPPORT

which climbers may be grown, as for instance in open borders or on lawns, the provision of suitable support for them becomes a matter of some difficulty. Such places are of course entirely unnatural to them. Erections made of iron are lasting but they are usually ugly, often terribly so when, in time, rust has decayed and loosened their connections. For moderately tall climbers like clematises and some of the garden roses, poles or tripods of spruce or larch with their side branches left from 1 to 2 feet long are useful. For less tall kinds rough, crooked limbs of oak, elm, or ash, with the lateral branches shortened, are very suitable. The trouble comes when the buried bases decay and the whole thing becomes insecure and finally falls to the ground. For this reason I do not think tall climbers on poles are, as a general rule, desirable in the open ground, but shorter ones, say up to 8 feet high, given an agreeable diversity to a herbaceous border and, besides not taking so long to clothe their supports, are more easily renewed. For dwarf climbers like some species of *Lathyrus*, or annual climbers, ordinary pea-sticks will often suffice.

PERGOLAS

Essentially adapted for hot sunny climates, pergolas have been characteristic features in the pleasaunces and gardens of the Mediterranean peoples since very ancient times. They were popular with the early Romans and with the Egyptians before them. The purpose of the pergolas in these sunny countries was primarily to provide shade; they were, consequently, planted with climbers, most frequently the grape vine, close enough together to cover the roof entirely with foliage. In our duller climate a continuous pergola of that type—really a kind of tunnel of vegetation—is, to my mind, unsuitable. It is too likely, in wet summers especially, to be gloomy and depressing. For plants like the grape vine with

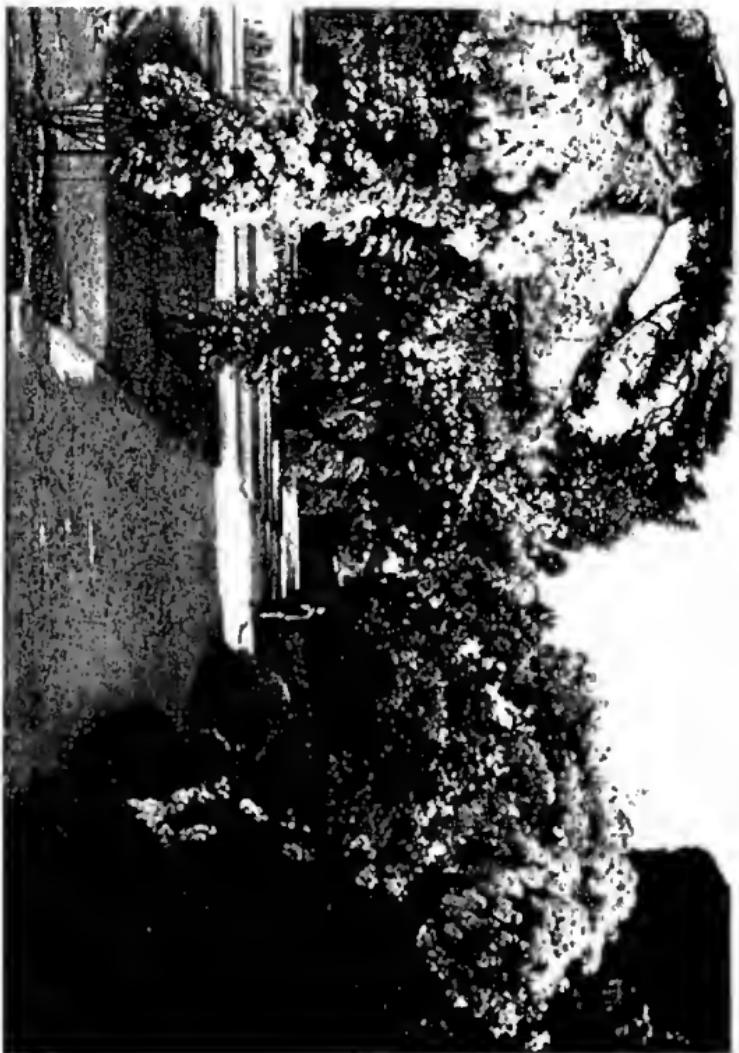
WALL SHRUBS AND CLIMBERS

pendulous bunches of fruit, and climbers whose flowers are borne in pendulous panicles like the wistarias, these continuous pergolas may be suitable. But the flowers of most of the climbers that are selected for pergola cultivation in these modern times open outside into the full sun and could, therefore, scarcely be seen by those walking inside. Consequently, I should rarely recommend for our climate a pergola with a continuous roof and sides, but one rather of an open type consisting of a series of "arches", say three to six yards apart linked together longwise and crosswise by chains, iron rods or strips of timber.

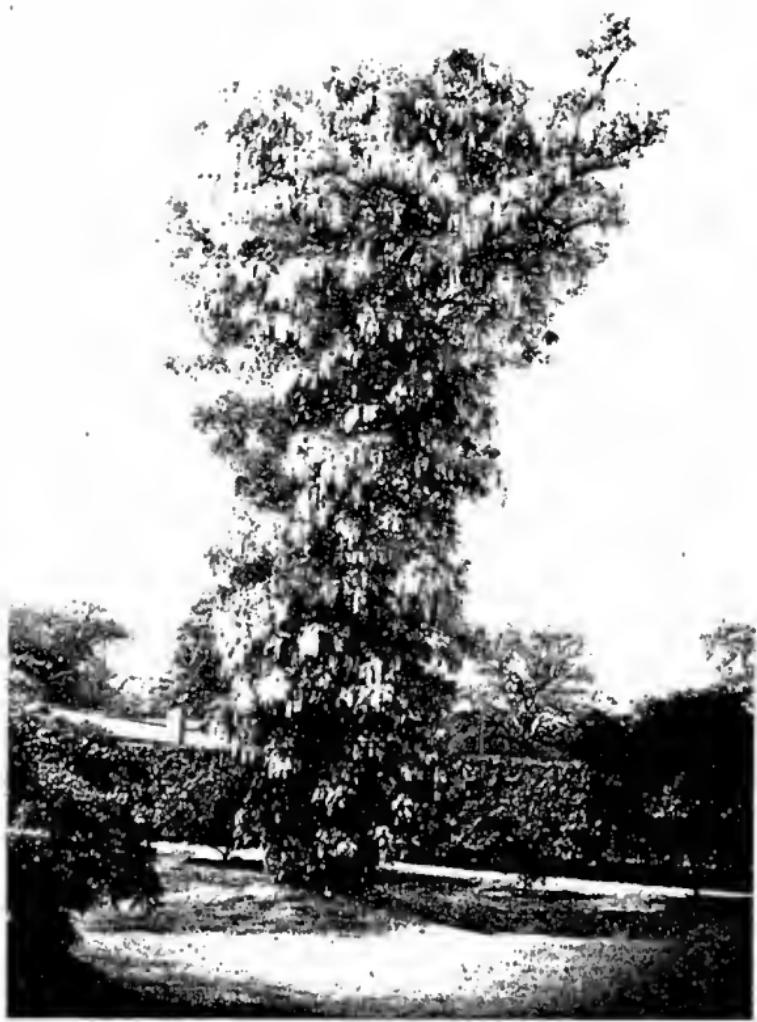
Most people will agree that a seat under a tree will give restful shade in hot weather infinitely more enjoyable than that provided by any pergola.

Construction. Pergolas may be constructed wholly of iron or wholly of wood, or, it may be, partly of either of these with brick used for the uprights. Such solidly brick-built uprights are the most costly to construct, but they are "everlasting" and to pergolas of large size and in conspicuous positions they give a character of permanence and distinction impossible to achieve with iron or wood alone.

A pergola made of iron has the double advantage of being cheap and lasting, but, although quite without offence in time of leaf, it is apt to be unsightly in winter, except where evergreens are used. This applies to arbours and all garden structures for climbers that are made of iron. And the more elaborate they are the more melancholy as a rule is the result, especially after deterioration sets in. Still, many London villa gardens are afflicted with them. On the whole a pergola constructed of brick pillars with wooden connections placed crosswise and lengthwise must be considered the most satisfactory, especially if the wood be a lasting one like oak or teak. Especially is this the case where the pergola is of sufficient length to constitute an imposing feature.



PART OF ROSE PERGOLA AT KEW



WISTARIA ON OLD OAK AT TITTENHURST

See page 19

METHODS OF SUPPORT

Some consideration is essential in selecting the site for a pergola. It should never be dumped in an isolated position but should rather lead from one building to another, or from one feature of the garden to another. It follows therefore that a pergola is rightly placed over a path, even if this be a grassy one.

Furnishing. With regard to the effective furnishing of pergolas, a good plan would seem to be to use the genuine climbers for covering the upper parts, the "roof" as it were, and to plant dwarf climbers or shrubs at the base of the uprights for furnishing them. Some climbers—wistarias and vines for instance—can by careful pruning and training be made to furnish the uprights, but for most of them the process would be slow and difficult, for, as we know, their natural tendency is to get away from the earth and reach the sunlight, leaving only bare stems at the base. I have seen rose pergolas on which this association of genuine climbers for the "roof" and dwarfer ones for the pillars has been very successful.

The following is a list of shrubs and less vigorous climbers suggested for furnishing the uprights. They must of course be amenable to pruning so that they can be kept within convenient limits. It must be remembered that conditions on these uprights are not so favourable for tender plants as they are against walls although better than fully in the open ground. Those marked * must therefore be regarded as suitable plants for pillars in the warmer counties only.

Shrubs for the Uprights of Pergolas.

*Abelia floribunda	Ceanothuses of the Gloire de Versailles type
„ Schumannii	
*Aplopappus ericoides	*Colquhounia coccinea
Azara integrifolia	Corokia Cotoneaster
Calceolaria integrifolia	*Coronilla glauca

WALL SHRUBS AND CLIMBERS

<i>Cytisus monspessulanus</i>	* <i>Phygelius capensis</i>
• " <i>Porlock</i>	* <i>Prostranthera rotundifolia</i>
" <i>supranubius</i>	* <i>Punica Granatum nana</i>
* <i>Dendromecon rigidum</i>	* <i>Rhaphithamnus cyanocarpus</i>
<i>Escallonia</i> s of the "Donard" type	<i>Raphiolepis Delacouri</i>
* <i>Hypericum Leschenaultii</i>	<i>Ribes laurifolium</i>
<i>Indigofera Gerardiana</i>	" <i>speciosum</i>
<i>Jasminum nudiflorum</i>	" <i>viburnifolium</i>
<i>Kerria japonica plena</i>	* <i>Sophora macrocarpa</i>
* <i>Myrtus communis tarentina</i>	* <i>Teucrium fruticans</i>
<i>Olearia erubescens</i>	* <i>Veronica Hulkeana</i>
<i>Osteomeles Schwerinii</i>	* <i>Viburnum macrocephalum</i>
* <i>Pentstemon cordifolius</i>	

Climbers for the Uprights of Pergolas.

<i>Actinidia kolomikta</i>	<i>Kadsura japonica</i>
" <i>polygama</i>	<i>Lathyrus pubescens</i>
<i>Aristolochia heterophylla</i>	<i>Lonicera Brownii</i>
" <i>moupinensis</i>	" <i>Caprifolium</i>
* <i>Billardiera longiflora</i>	" <i>italica</i>
<i>Clematis alpina</i>	" <i>japonica</i> and vars.
" <i>Flammula</i>	" <i>Periclymenum</i>
" <i>rubro-marginata</i>	<i>Muehlenbeckia compressa</i>
" <i>Jackmanii</i> and vars.	<i>Pileostegia viburnoides</i>
" <i>lanuginosa</i> and vars.	<i>Rubus australis</i>
" <i>macropetala</i>	* <i>Smilax aspera</i>
" <i>tangutica</i>	* <i>Sollya heterophylla</i>
<i>Eccremocarpus scaber</i>	*
<i>Euonymus radicans</i> "Silver Queen"	" <i>parviflora</i>
	<i>Trachelospermum asiaticum</i>
	<i>jasminoides</i>
	<i>Vitis heterophylla</i>

VERONICA HULKEANA





Photo : Blanche Henrey
MYRTLE. MYRTUS COMMUNIS

III: PRUNING

Purpose of Pruning. There is a rather prevalent idea that pruning is essential to keep all shrubs in perfect health, but it is not so. Given suitable conditions at the root and space sufficient for full development, they seldom require pruning in the technical sense of the word. Worn out, decayed branches may be removed or overcrowded ones thinned out, but that is a sanitary measure and one that anticipates what nature herself will eventually do, only more slowly. Pruning may also be desirable to bring a shrub to a more shapely form.

But wall plants exist under artificial conditions and must be kept within certain limits. The position they occupy necessarily involves a periodical, usually annual, pruning which consequently becomes an important consideration, dependent mainly on two factors, viz., amount of space available and time of flowering.

With regard to space, this depends not only on the amount of wall surface available, but also on the distance the shrub can be allowed to stand out from the wall. On the whole I think plants on walls, pergolas, &c., are pruned too much. The last aim should be to get them flattened to the surface in the way that fruit-growers treat their peaches and nectarines. Both for the production of abundant blossom and for the general all-the-year-round appearance, a loosely grown shrub with its branches standing out 1 or 2 feet from the wall is preferable to one kept close to it. In fact many shrubs will only show their best when allowed to do so. The protective influence of a wall naturally decreases the farther vegetation is growing away from it and the more outstanding

WALL SHRUBS AND CLIMBERS

growths of tender plants often suffer from injury by severe cold which the inner parts escape. Unless the plant is severely injured, however, this is usually of little consequence. The cold acts as a kind of pruning. It need scarcely be added that the dead parts should not be trimmed off until danger of severe frost is past as they give some degree of protection.

Time for Pruning. With regard to the time of year at which this should be done it may be said that the general principles governing this matter are the same for wall plants as for those situated in the open ground. Chiefly, regard must be paid to the time of flowering. Shrubs are, in this respect, divisible into two groups, viz., those that flower on the *current season's growth* and generally from midsummer onwards to autumn; secondly, those that flower on the *growths of the previous summer* and generally from March to June. The former group, of which the Jackmanii group of Clematis, Buddleia Davidii, and the species of Vitex are common examples, should be overhauled and whatever pruning they require done in late winter or early spring, so as to leave the longest possible period of growth before their flowering time comes later on in the year.

But by far the greater proportion of shrubs and climbers flower on the growths made the previous summer and form the second group. These must be pruned immediately after they have flowered. To do so previously would, of course, rob the plant of much of its blossom. Take two ceanothuses, for example, the well-known and often wall-grown C. Veitchianus and C. dentatus. Both of these blossom in May on shoots made the previous year and cannot therefore be pruned in winter or spring. The proper plan is to wait until the flowers have faded and then cut out shoots that have flowered, also weakly and overcrowded ones, but leaving undisturbed a sufficient crop of young growing shoots on which the following year's inflorescence will depend. The

PRUNING

same considerations have to be borne in mind when removing growths projecting too far from the wall to be convenient. These outstanding growths usually bear the fullest crops of blossom and to remove them before they have made their display is a distressing waste. Yet it is frequently done in a certain class of public park, especially where an annual clipping in spring or winter is practised for the sake of neatness without any regard to time of flowering.

It has to be mentioned that there are a few exceptions to the rules just indicated. There are some shrubs, notably the double-flowered variety of *Prunus triloba* (see p. 133), which flower so early in the year—say February to early April—that even when the blossom has faded there still remains for them a full season for growth. Such plants can be pruned back almost to the older wood, just as has been advised for those that flower on the current season's growths. The outstanding principle in regard to the pruning of all flowering shrubs on walls is to do it at such a time as will give the longest possible period for growth before the advent of the next flowering season, subject of course to the preservation of the current season's crop of blossom.

For plants grown on walls, not for their blossom but only for their foliage or autumnal colour, such as the loquat, vines and variegated shrubs, the time for pruning is not so important but winter for deciduous plants and early spring for evergreens is the best time, with possibly a secondary over-haul for redundant or too crowded growths in August.

IV: VARIOUS TYPES OF CLIMBERS AND WALL SHRUBS

Self-clinging Climbers. Where the constructive material or other character of walls precludes the use of nails or other fixed means for supporting climbers, it may be useful to give the names of some of those endowed with aerial roots and therefore self-supporting. It must be said that they are not, on the whole, a particularly impressive or attractive lot, although the hydrangeas are handsome in flower and the vitises well known for their autumnal beauty.

<i>Asteranthera ovata</i>	<i>Hydrangea petiolaris</i>
<i>Campsis chinensis</i>	<i>Pileostegia viburnoides</i>
,, <i>radicans</i>	<i>Rhus Toxicodendron radicans</i>
<i>Decumaria barbara</i>	<i>Schizophagma hydrangeoides</i>
,, <i>sinensis</i>	,, <i>integrifolia</i>
<i>Eccremocarpus volubilis</i>	<i>Trachelospermum (species of)</i>
<i>Euonymus radicans</i>	<i>Vitis Henryana</i>
<i>Ficus stipulata</i>	,, <i>inconstans</i>
<i>Hedera (species and varieties)</i>	,, <i>quinquefolia</i>
<i>Hydrangea anomala</i>	,, <i>striata</i>
,, <i>integerrima</i>	,, <i>Thomsonii</i>

Evergreen Climbers. From their scarcity in cooler and temperate regions of the globe, such for instance as the British Isles and Europe generally, it would seem that evergreen climbers (as apart from evergreen shrubs) are essentially tropical or sub-tropical in their nature. They are very numerous in the warmer latitudes and those that grow in colder ones must perhaps be regarded as escapes from, or outliers of, the warmer regions. How comparatively uncommon they are can be realized from the meagreness of the

VARIOUS TYPES

list given below which includes all those I can find that are adapted for the climate of Great Britain, except in such places as S. Cornwall where tender climbers like Tacsonia and Semele androgyna may occasionally be found. A curious character that pertains to a fair proportion of them is a lack of floral beauty as, for instance, in Hedera, Smilax, Ercilla, Decumaria and Rubus. It will be noticed, too, that the more beautiful kinds come from the warmer habitats such as Tasmania (Billardiera), Australia (Sollya), New Zealand (Clanthus), Chile (Berberidopsis, Lapageria, Mitraria, Mutisia), and Brazil (Passiflora, Solanum).

<i>Araujia sericofera</i>	<i>ium prostratum</i>
<i>Asteranthera ovata</i>	<i>Lonicera japonica</i> and others
<i>Berberidopsis corallina</i>	<i>Mitraria coccinea</i>
<i>Bignonia capreolata</i>	<i>Mutisia decurrens</i> and others
<i>Billardiera longiflora</i>	<i>Passiflora coerulea</i>
<i>Clematis Armandii</i> and others	<i>Pileostegia viburnoides</i>
<i>Decumaria barbara</i>	<i>Rosa Banksiae</i>
" <i>sinensis</i>	" <i>bracteata</i>
<i>Ercilla volubilis</i>	<i>Rubus bambusarum</i> and others
<i>Euonymus radicans</i>	<i>Senecio scandens</i>
<i>Ficus repens</i>	<i>Smilax aspera</i> and others
<i>Hedera Helix</i> and others	<i>Solanum crispum</i>
<i>Holboellia coriacea</i>	" <i>jasminoides</i>
" <i>latifolia</i>	<i>Sollya heterophylla</i>
<i>Hydrangea integrifolia</i>	" <i>parviflora</i>
<i>Jasminum primulinum</i>	<i>Stauntonia hexaphylla</i>
<i>Kadsura japonica</i>	<i>Trachelospermum asiaticum</i>
<i>Lapageria rosea</i>	" <i>jasminoides</i>
<i>Lardizabala biternata</i>	<i>Vitis striata</i>
<i>Leptospermum scopar-</i>	

House Climbers and Shrubs. The following is a short list of wall shrubs and climbers of great ornamental value which I

WALL SHRUBS AND CLIMBERS

have selected to recommend for houses ranging from a suburban villa to a country cottage. In these places, of course, beauty and fragrance are usually the main considerations, rarity and botanical interest being secondary matters. The characters of the plants mentioned will be found in the body of the work. Most of them will be happy with either east, south, or west exposures, but those marked N may be tried on north walls and those marked S are especially sun-lovers. Those marked T are tall vigorous growers.

	liance"
S	<i>Fremontia californica</i>
N	<i>Jasminum nudiflorum</i>
N	<i>Lapageria rosea</i>
N	<i>Lonicera italica</i>
N	<i>Periclymenum</i> (early and late Dutch)
NT	<i>„ tragophylla</i>
	<i>Myrtus communis</i>
	„ „ <i>tarentina</i>
	<i>Olearia erubescens</i>
S	<i>Pentstemon cordifolius</i>
	<i>Prostranthera rotundi-</i>
	<i>folia</i>
	<i>Pyracantha coccinea</i>
	„ <i>Rogersiana</i>
	<i>Ribes speciosum</i>
	<i>Roses climbing varieties</i>
	(not <i>Polyantha</i> section)
T	<i>Solanum crispum</i>
	<i>Sophora macrocarpa</i>
	<i>Veronica Hulkeana</i>
	<i>Viburnum macrocephalum</i>
T	<i>Wistaria chinensis</i>

LONICERA JAPONICA

Photo : Blanche Henry





CLEMATIS MONTANA

VARIOUS TYPES

Climbers for Growing over Trees. There has to be considered the most natural way of cultivating climbers, which is to provide them with a tree or large bush over which they may be allowed to scramble at will. In the gardens of Italy and the south of France many wonderfully gorgeous colour effects are achieved by planting climbers—more especially wistarias and Banksian roses—at the base of large trees. The wistarias are frequently, as at Caddenabia on Lake Como at the Villa Carlotta, 50 to 90 feet high. We see a duller but similar association in the chalk districts of Britain provided by the Travellers' Joy (*Clematis Vitalba*). In gardens, a failing or unappreciated tree may frequently be used as a host for a climber instead of being destroyed. Besides displays provided by blossom there is autumnal colour to be borne in mind. *Vitis Coignetiae*, for instance, growing over a tree in the Knap Hill nursery has for many given a feast of colour.

For trees of smaller size like laburnum or hawthorn the less vigorous climbers may be used, such as roses, *Clematis Jackmanii* and other varieties, *Lonicera japonica*, the akebias, the common honeysuckles, &c. I have never seen the clematis more beautiful than where it has been allowed to clamber through and over a laburnum, as at Kew; or over dwarf apples as one used to see it at Gravetye, where the late Wm. Robinson evidently preferred its blossom to the trees' rightful fruit. Charming effects too have been produced by allowing the wild "musk rose" (*Rose Brunonii*) to scramble over large hollies whose black green foliage shows up the white blossom to perfection.

It is often difficult to get climbers to start satisfactorily when planted to grow over large trees, although easy enough if the trees are of small size. Planted at the base of a large trunk, they are apt to suffer from too dense shade and from dryness at the root, but as a rule they have no active roots to contend with there. The climbers most naturally fitted for

WALL SHRUBS AND CLIMBERS

such places are the self-clinging ones such as *Hydrangea petiolaris*, the *schizophragmas*, *Vitis inconstans* and *V. quinquefolia* (the true Virginian creeper). These, when once their aërial roots get hold, will require no further attention. They are, furthermore, in their young state, fitted by nature for the more or less shady position. Climbers like the vines and wistarias, which have no aërial roots, but keep their hold by means of tendrils or twining young shoots, will need artificial support until they reach the smaller ramifications of the branches. Close to the trunk of a large tree there is practically no root competition—that occurs more at the circumference of the branches—but it is advisable, nevertheless, to dig out a couple of barrow loads of the old soil and replace them by good loam for the climber to start with.

It is practically no use attempting to establish climbers on healthy, isolated examples of such trees as elm, horse chestnut, lime or beech. The competition for sunlight and for sustenance at the root is too severe. The oak, however, is more companionable, or at least tolerant.

A second method of establishing a climber on a large tree is to select a low-growing branch near the outskirts and drive into the ground a stout stake to which the branch is to be fastened to hold it firm. The climber should be planted at the base of this stake up which it can be trained until it reaches the branches. To enable it to get a fair start, a hole, say 4 feet across and 2 deep deep, should be made for it and filled with good soil. Where there is likely to be severe root competition I have found it a good plan to sink a square, bottomless box in the hole and then fill it with soil. The box should be made of quite thin boards of an easily decayable wood and may be left in the ground. It will last long enough to keep the roots of the host tree at bay until the climber is firmly established.

The following is a selection:

VARIOUS TYPES

For Large Trees.

<i>Actinidia arguta</i>	<i>Polygonum Aubertii</i>
<i>Aristolochia Siphonanthoides</i>	<i>„ baldschuanicum</i>
<i>Campsis chinensis</i>	<i>Rosa Brunonii</i>
„ <i>radicans</i>	<i>Schizophragma hydrangeoides</i>
<i>Celastrus articulatus</i>	„ <i>integrifolia</i>
<i>Clematis Vitalba</i>	<i>Stauntonia hexaphylla</i>
„ <i>montana</i>	<i>Vitis Coignetiae</i>
<i>Elaeagnus glabra</i>	„ <i>Davidii</i>
<i>Holboellia coriacea</i>	<i>Wistaria chinensis</i>
„ <i>latifolia</i>	„ <i>floribunda</i> and its varieties
<i>Hydrangea anomala</i>	
„ <i>petiolaris</i>	

For Small Trees and Large Shrubs.

<i>Akebia lobata</i>	<i>Lonicera etrusca</i>
„ <i>quinata</i>	„ <i>japonicum</i>
<i>Aristolochia moupinensis</i>	„ <i>Periclymenum</i>
<i>Clematis Jackmanii</i> and other garden varieties	<i>Mutisia</i> (species of)
„ <i>indivisa</i>	<i>Muehlenbeckia complexa</i>
<i>Jasminum officinale</i>	<i>Solanum erisipum</i>
<i>Loniceria Caprifolium</i>	„ <i>jasminoides</i>

Shrubs and Climbers for North Walls. There are frequent enquiries for shrubs that will succeed against north walls and are of more interest than ivy. Shrubs, of course, that prefer shade—and they are practically always evergreen—are the most likely the promising, and the following list gives the names of some of them. Their individual characteristics may be found by consulting the body of the work. It is assumed that such walls, whilst not being darkened, should be more or less sheltered from north and north-east winds by other vegetation, or, it may be, by other buildings.

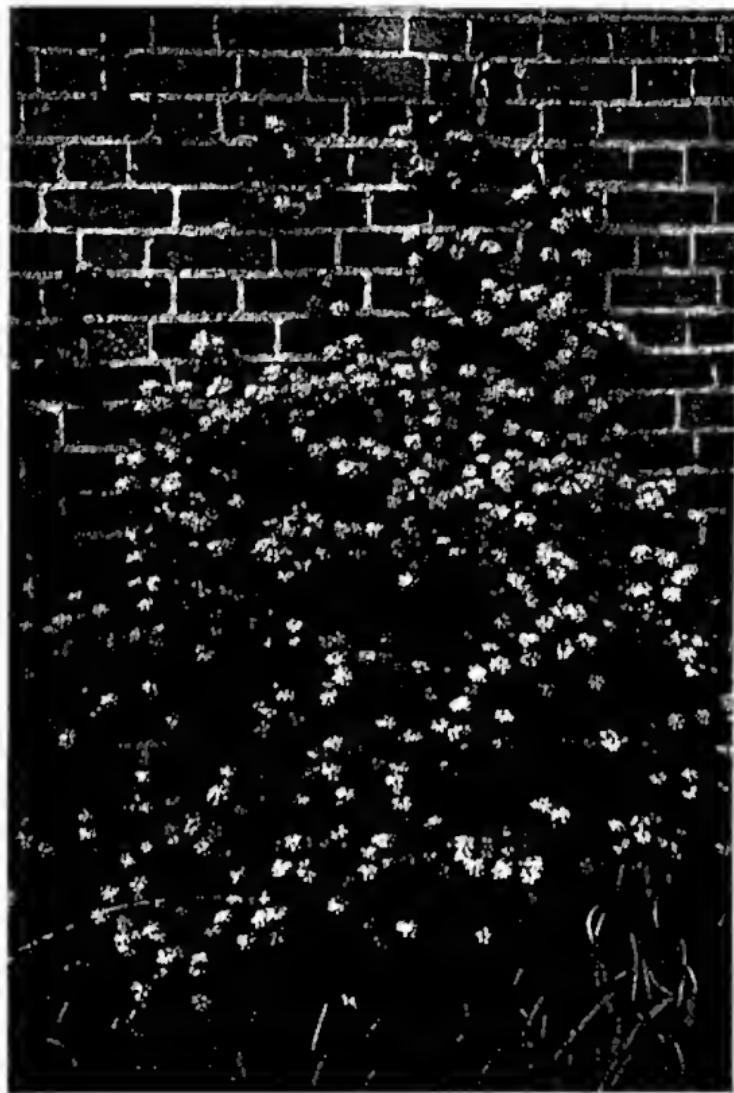
WALL SHRUBS AND CLIMBERS

Walls fully exposed to these winds, especially in cold districts, are difficult to furnish with interesting things. Morello cherries, however, are nearly always a success even there, but they are deciduous.

<i>Acradenia Frankliniae</i>	<i>Hydrangea petiolaris</i>
<i>Asteranthera ovata</i>	<i>Jasminum nudiflorum</i>
<i>Berberidopsis corallina</i>	<i>Kerria japonica plena</i>
<i>Billardiera longiflora</i>	<i>Lapageria rosea</i>
<i>Camellia japonica</i> (varieties of)	<i>Lonicera tragophylla</i>
,, <i>Sasanqua</i>	<i>Olearia Solandri</i>
<i>Cocculus laurifolius</i>	<i>Osmanthus Delavayi</i>
<i>Cotoneaster horizontalis</i>	<i>Pileostegia viburnoides</i>
,, <i>microphylla</i>	<i>Pyracantha</i> (species of)
<i>Decumaria sinensis</i>	<i>Rhaphithamnus cyanocarpus</i>
<i>Drimys Winteri</i>	<i>Schizandra</i> (species of)
<i>Excallonia macrantha</i>	<i>Tricuspidaria dependens</i>
,, <i>Iveyi</i>	,, <i>lanceolata</i>
<i>Euonymus radicans</i>	<i>Viburnum japonicum</i>
<i>Ficus stipulata</i>	,, <i>odoratissimum</i>
<i>Hedera</i> (species and varieties)	<i>Vitis Henryana</i>
<i>Hydrangea integrifolia</i>	<i>Weinmannia trichosperma</i>

Shrubs for Low Walls. There are often spaces available for plants that can be grown against, or on, low walls—say three to six feet high—such, for instance, as under windows or at the foot of taller walls already occupied by larger-growing shrubs or climbers which have left bare spaces at the base. Such plants must be naturally small or capable of being kept so. The following is a list of suitable plants: those marked † are of especial merit:

<i>Abelia Engleriana</i>	† <i>Adenocarpus decorticans</i>
† „ <i>Schumannii</i>	<i>Actinidia kolomikta</i>



CORONILLA GLAUCA



LEVIGATRICE COCCINEA

VARIOUS TYPES

<i>Actinidia polygama</i>	<i>Jasminum nudiflorum</i>
<i>Anthyllis Barba-Jovis</i>	<i>Lavandula dentata</i>
" <i>Hermanniae</i>	<i>Stoechas</i>
<i>Aplopappus ericoides</i>	<i>Lippia citriodora</i>
<i>Bigelowia graveolens</i>	<i>Myrtus communis</i>
<i>Billardiera longiflora</i>	" " <i>tarentina</i>
<i>Bupleurum fruticosum</i>	<i>Olearia erubescens</i>
† <i>Calceolaria integrifolia</i>	<i>Osmanthus Delavayi</i>
† <i>Camellia Sasanqua</i>	<i>Osteomeles Schwerinae</i>
" <i>Thea</i>	" <i>subrotunda</i>
† <i>Cantua buxifolia</i>	† <i>Pentstemon cordifolius</i>
† <i>Carpenteria californica</i>	<i>Philadelphus Coulteri</i>
† <i>Chimonanthus fragrans</i>	" <i>mexicanus</i>
<i>Clematis macropetala</i>	<i>Phlomis fruticosa</i>
† <i>Clianthus puniceus</i>	<i>Phygelius capensis</i>
<i>Colquhounia coccinea</i>	† <i>Prostranthera rotundifolia</i>
<i>Corokia Cotoneaster</i>	<i>Punica Granatum nana</i>
† <i>Coronilla glauca</i>	<i>Raphiolepis indica</i>
" <i>valentina</i>	<i>Ribes laurifolium</i>
<i>Cydonia lagenaria</i>	† " <i>speciosum</i>
† <i>Cytisus monspessulanus</i>	" <i>viburnifolium</i>
† " " <i>"Porlock"</i>	<i>Salvia Grahamii</i>
<i>Daphne odora</i>	<i>Sollya heterophylla</i>
<i>Dicentra chrysantha</i>	<i>Sophora macrocarpa</i>
<i>Diplacus glutinosus</i>	<i>Styrax Wilsonii</i>
<i>Fallugia paradoxa</i>	<i>Teucrium fruticans</i>
<i>Fendlera rupicola</i>	† <i>Veronica Hulkeana</i>
<i>Grevillea rosmarinifolia</i>	† <i>Viburnum macrocephalum</i>
" <i>sulphurea</i>	

Wall Plants for High Narrow Spaces. Frequently, there are narrow spaces on houses, such as between windows or between windows and house corners, where there is room for a climber or wall shrub which is at once tall and capable of

WALL SHRUBS AND CLIMBERS

being kept to narrow limits. The following species are suggestions for such places:

<i>Abutilon vitifolium</i>	<i>Kadsura japonica</i>
<i>Caesalpinia Gilliesii</i>	<i>Kerria japonica plena</i>
<i>Ceanothus thyrsiflorus</i>	<i>Lapageria rosea</i>
<i>Cestrum aurantiacum</i>	<i>Lonicera japonica</i>
,, <i>elegans</i>	<i>Mandevilla suaveolens</i>
<i>Clethra arborea</i>	<i>Osteomeles Schwerinae</i>
<i>Clianthus puniceus</i>	<i>Pyracantha coccinea</i>
<i>Cytisus proliferus</i>	,, <i>Rogersiana</i>
,, <i>supranubius</i>	<i>Solanum crispum</i>
<i>Dendromecon rigidum</i>	,, <i>jasminoides</i>
<i>Fremontia californica</i>	<i>Sophora tetraptera</i>
<i>Hoheria (all species)</i>	<i>Trachelospermum jasminoides</i> var. <i>japonicum</i>
<i>Hydrangea petiolaris</i>	
<i>Hypericum Leschenaultii</i>	<i>Vitis (species of)</i>
<i>Jasminum primulinum</i>	

PART II

**DESCRIPTIVE LIST OF CLIMBERS AND WALL
SHRUBS**

Part II

DESCRIPTIVE LIST OF CLIMBERS AND WALL SHRUBS

ABELIA

A. floribunda, the most beautiful of all the abelias for wall cultivation, was introduced from Mexico in 1841. In a wild state it is an evergreen bush 6 to 10 feet high and even in mild parts of this country it is usual to grow it on walls. The leaves are 1 to 1½ inches long, ½ to 1 inch wide, slightly toothed and lustrous green. The flowers hang thickly from underneath the branches of the previous year, opening in June; they are pendulous, slenderly funnel-shaped, 1½ to 2 inches long and of a charming rosy red. A fine plant on the late Sir Herbert Maxwell's house at Mönreith in Wigtonshire is 18 feet high. Although far from being as vigorous as that, it can still be grown in the suburbs of London, given a sunny wall and a good loamy soil.

Two other species of Abelia require wall protection in cold districts to cultivate them satisfactorily, viz., *A. Engleriana* and *A. Schumannii*. Both have rose-coloured flowers much shorter than those of *A. floribunda* continuing to open from June or July to October. They are both very attractive—about 6 feet high—and are suitable for a comparatively low wall. Natives of Western China.

ABUTILON

A. vitifolium is the most notable species of this genus that can be grown out-of-doors in this country. Very beautiful

WALL SHRUBS AND CLIMBERS

in the warm counties planted fully in the open, it has, in the London district, to be given wall treatment, and being naturally a small tree rather than a shrub and frequently over 15 feet high, it is only suited for high walls such as those of a house. An ideal position for it would be an angle facing southwards formed by two walls where it could be left to grow at will not nailed and only pruned to keep it within necessary bounds. It is a singularly beautiful plant with large, maple-like, softly downy leaves averaging 5 or 6 inches in width. Flowers about 3 inches wide, pale purplish lilac (white in var. *alba*) and in shape resembling a "single" holly-hock blossom. Introduced from Chile in 1836; flowers in June and July.

A. megapotamicum (better known in gardens as *A. vexillarium*) is a graceful evergreen shrub with very slender twigs bearing taper-pointed, toothed leaves 2 to 3½ inches long, with a heart-shaped base. It blossoms freely from April onwards from the leaf-axils, the flowers being pendulous on slender stalks about ½ inch long, the corolla yellow, 1½ inches long, enclosed at the base by a rich red calyx 1 inch long. A conspicuous feature of each blossom is the brown, club-shaped cluster of stamens and purple stigmas borne on a long stalk and standing out ½ inch beyond the corolla. Native of Brazil. It has grown luxuriantly on a sheltered wall at Kew, but is safer in the milder counties. Var. *variegatum* has its leaves blotched with bright yellow.

ACACIA

In many parts of Cornwall various species of Acacia are grown, some fully in the open, some on walls. Most of them are of considerable size and are thus suitable only for high walls, ends of houses and such like places. The different species are very variable in leaf characters but the flowers are always of some shade of yellow and they are borne either in



ABUTILON VITIFOLIUM



ACACIA DEALBATA. (MIMOSA.)

ACACIAS—ACRADENIA

globose clusters or in cylindrical ones like miniature bottle-brushes; these are from $\frac{1}{2}$ to $1\frac{1}{2}$ inches long. They are all evergreen and mostly blossom in early spring.

It is scarcely worth while to give lengthy descriptions of the different species but the following may be mentioned as well worth trying in the warmest counties. When successfully grown, few trees and shrubs are more beautiful.

A. dealbata, commonly known as "mimosa" in London flower shops (which obtain their supplies mostly from Cannes) is the hardiest species and is well known for its silvery, feathery foliage and profuse masses of blossom. It is a large tree and is only likely to be a success against a high wall. *A. Baileyana* has also silvery foliage and flowers profusely but it is much smaller and more fitted for wall cultivation; a wall 8 to 12 feet high would be very suitable. It is not quite so hardy as *dealbata* but succeeds perfectly in S. Cornwall in the open ground. *A. pulchella* is one of the less robust species; its foliage is green and very dense and its rich yellow flowers extremely abundant. These three are suitable for trial in the south-western counties, but the following are also represented in Cornish gardens and may be tried on walls: *A. armata*, *A. cultriformis*, *A. juniperina*, *A. leprosa*, *A. longifolia*, *A. podalyraefolia*, and *A. retinodes*.

A. Riceana and *A. verniciflua* are very vigorous on a wall at Exbury, near the Solent.

ACRADENIA FRANKLINIAE

This Tasmanian evergreen is a bush of rounded habit and will grow up to 10 or 12 feet high. The young shoots are covered with a minute grey down and the leaves consist of three leaflets, each of which is 1 to 3 inches long, about $\frac{1}{2}$ inch wide, of stiffish texture, shallowly toothed towards the tips and dark green. The shrub belongs to the Rue family and

WALL SHRUBS AND CLIMBERS

the leaves are thickly set with odorous oil-glands. Flowers white, opening in May in clusters 1 to 2 inches across, each blossom about $\frac{1}{2}$ inch wide with five downy petals.

This shrub was discovered in 1842, growing on the banks of the Franklin River and was introduced three years later. It is named after Lady Franklin, wife of Sir John, the Arctic explorer, who was Governor of Tasmania at the date of its discovery. Hardy in mid-Sussex and further southwards and westwards, it needs the protection of a wall near London. It is the only species of its genus.

ACTINIDIA

A genus of deciduous climbers, all from Eastern Asia, supporting themselves by twining. The leaves are alternately arranged on the branches, are never subdivided, and the flowers (often unisexual) come in the leaf-axils either in clusters or singly. They are of vigorous growth and easily cultivated if given a reasonably fertile soil. Except for collectors, *A. kolomikta* and *A. chinensis* will adequately represent the genus.

A. arguta is perhaps the most vigorous of all the species and in its native countries—Korea and Japan—climbs to the top of large trees. Leaves dark shining green, 3 to 4 inches long and wide, the margins set with slender teeth; leafstalk 1 $\frac{1}{2}$ to 3 inches long. The flowers, which open in June and July, and are fragrant, come usually in triplets, each $\frac{3}{4}$ inch across, white tinged with green, with numerous purple-anthered stamens in the centre. Fruit an ellipsoid, greenish yellow berry about 1 inch long, many seeded, insipid in flavour but eaten by the Japanese.

A. chinensis, introduced from Western China in 1900, is much more ornamental than the preceding and, being less vigorous, more easily accommodated. The branchlets, leaves and fruits are all more or less hairy. Leaves heart-shaped,

ACTINIDIA

5 to 7 inches long, not quite as wide. Flowers $1\frac{1}{2}$ inches wide, creamy white, changing to buff yellow, several in a cluster. Fruit roundish egg-shaped, 1 to 2 inches long and probably the most palatable in the genus. This is the best of the stronger-growing species, both for its flowers and the interesting fruits. It will grow 25 feet high and is useful for pergolas, arbours, &c. Plants mostly unisexual but sometimes bisexual.

A. kolomikta, from China, Japan and Manchuria, is one of the weaker growing kinds and is quite suitable for training loosely against a wall or up rough untrimmed branches stuck in the ground. Its chief attraction is in the foliage, a goodly proportion of its leaves being variegated with white and pink at the terminal part; sometimes quite half, occasionally the entire leaf will be so coloured. The flowers are white, $\frac{1}{2}$ inch wide, and the plants unisexual. The male or staminate plants are usually the more variegated. This *Actinidia* grows from 6 to 10 feet high. (See also the following species.)

A. polygama, like *A. kolomikta*, is grown chiefly for the curious and attractive colouring of the leaves which are often silvery-white, or yellowish at the terminal part in various degrees, from a small portion to almost the entire leaf. In both species the male plant is the more strongly variegated. There is a curious distinction between the two species; if a young shoot of *A. kolomikta* be slit lengthwise the pith will be found to be "chambered", that is, reduced to thin transverse disks with empty spaces between, whereas in *polygama* it is continuous and not divided. It grows some 10 to 15 feet high; its leaves are 3 to 6 inches long; and its white flowers, borne singly or in threes, are each $\frac{1}{2}$ inch wide. Widely spread in nature from N.E. Asia to Japan and Central China.

WALL SHRUBS AND CLIMBERS

ADENOCARPUS DECORTICANS

A very charming member of the broom family and a native of the Sierra Nevada, Spain, this shrub is too tender to be grown fully in the open except in the milder counties. Near London it must have wall protection and, to get the best out of it, the exposure should be as sunny as possible. It is a deciduous shrub with very distinct foliage, the crowded leaves being made up of two or three very slender leaflets $\frac{1}{2}$ to 1 inch long, but only $\frac{1}{8}$ inch wide. Flowers of a brilliant golden yellow similar to common gorse and borne very copiously in May and June six to thirty in terminal clusters 1 to $2\frac{1}{2}$ inches long. Seed-pod 2 inches long, covered with sticky glands. It does not need a very rich soil and should be grown in pots until given its permanent place. I have never seen it more beautiful than in the garden at Grayswood Hill near Haslemere.

AKEBIA

There are two species of Akebia in cultivation, both natives of Japan and China, deciduous, and genuine climbers, which support themselves on whatever they may be growing by their twining stems. In *A. lobata* the leaves are made up of *three* stalked leaflets, each 2 to 4 inches long with wavy margins and notched at the end. The other species, *A. quintata*, is very distinct in its leaves being composed usually of *five* leaflets. In both species the male and female flowers are borne on the same raceme, these being dull purple and fragrant, opening in April, but of no great beauty. The chief interest in these twiners is in the fruits which are about 3 inches long, shaped like a thick sausage, violet-coloured and very fleshy. As they become fully ripe they split and reveal the numerous black seeds imbedded in white pulp. Both species are very hardy and thrive in any soil of even modest quality. The best way to grow them is over a small tree of little worth, such as a failing apple tree, thorn or laburnum.

ANAGYRIS—ANTHYLLIS

ANAGYRIS FOETIDA

(*"Bois puant"* of the French)

A deciduous member of the broom family found wild in the countries bordering the Mediterranean. Naturally a shrub or even a small tree, it requires with us the protection of a wall and, being a sun-lover, a wall facing south if possible. Three leaflets, each 1 to $2\frac{1}{2}$ inches long, go to a leaf and the specific name refers to the unpleasant odour they emit when (but only when) they are crushed. The yellow flowers are crowded from a dozen to a score or racemes 3 inches or so long. Suitable for large collections or for lovers of rarities rather than for the ordinary cultivator with limited space. It flowers in late spring or early summer.

ANTHYLLIS BARBA-JOVIS

(*Jupiter's Beard, Silver Bush*)

An evergreen shrub which needs the protection of a wall where it will grow 8 feet or more high, long known in gardens but not common because it needs a sunny south wall to bring out its best qualities. It belongs to the broom family, is a native of S.W. Europe, and is chiefly remarkable for the silvery sheen given to its foliage by a thick covering of silky hairs. Each leaf is about 2 inches long and consists of from nine to nineteen leaflets. The flowers are pale yellow, crowded in clusters about 1 inch wide and open in May and June. An attractive shrub. A second species,

A. Hermanniae, is also rather tender and in cold places is seen at its best against a wall. It is a deciduous shrub up to 2 or 3 feet high with crooked young shoots ended in a spine and is naturally of dense bushy growth. Leaves simple (occasionally trifoliate) $\frac{1}{2}$ to 1 inch long, $\frac{1}{2}$ inch or less wide. Flowers yellow, each $\frac{1}{2}$ inch long, pea-shaped, in shortly stalked clusters of three to five opening in June and July. Widely spread in the Mediterranean region, especially in

WALL SHRUBS AND CLIMBERS

Greece, this attractive shrub is usually found in dry, sunny, rocky places as a small twiggy shrub. In gardens it grows somewhat more freely. It is useful for growing on a low wall or under other plants of taller growth and rejoices in abundant sunshine.

APLOPAPPUS ERICOIDES

An evergreen shrub up to 5 feet high, belonging to the daisy family (*Compositae*) and a native of California. As the specific name implies, its foliage is heath-like, the leaves being only $\frac{1}{2}$ to $\frac{1}{3}$ inch long and the thickness of a pin, dark green, without a stalk, several of them clustered at each joint. The flower-heads are yellow, opening very abundantly in August and September in long-stalked, open clusters 2 to 3 inches wide, each flower-head $\frac{1}{2}$ inch wide, with five ray florets. A handsome and distinct shrub, hardy in our warmer counties but needing wall protection near London.

ARAUJIA SERICOFERA

(*Physianthus albens*)

A very vigorous evergreen climber native of South America that supports itself by the twining stems which exude a milky sap when cut. The young shoots, which grow several feet long in a season, and the leaves are clothed with grey down, the latter 2 to 4 inches long and half as much wide. The flowers open in late summer in clusters of four to eight at the leaf joints and are 1 inch long, white, tubular at the base, the spreading five lobes at the mouth giving each of them a diameter of 1 to $1\frac{1}{2}$ inches. They are pleasantly fragrant. The fruits are strikingly large, being grooved pods 5 inches long and 2 to 3 inches wide. This twiner is tender even on a wall near London and is happier thirty or forty miles to the south. Otherwise it is easily grown and needs abundant space. In the mildest counties it might well be tried to grow over a decrepit tree.

ARISTOLOCHIA—ARISTOTELIA

ARISTOLOCHIA

(*Birthworts*)

A genus of twining climbers with curiously shaped flowers represented in gardens by some half a dozen deciduous species. The best known of these is *A. Sipho* (Dutchman's pipe) whose flowers are 1 to $1\frac{1}{2}$ inches long, tubular, inflated and bent in the shape of a siphon, the tubular part yellowish green, the flat expanding lobes brown-purple. They are not very pretty but their construction is peculiar and interesting. Leaves heart-shaped, up to 10 inches long, pale green. This twiner is very vigorous and will climb 20 to 30 feet high; on account of this strong growth and its large foliage it is useful for quickly covering arbours, summer houses, &c. Native of the Eastern United States, introduced in 1783.

Two other species of Western Chinese origin are also worth growing, viz., *A. heterophylla* and *A. moupinensis*. Both have flowers similar in shape to those of *A. Sipho* but more prettily coloured; in *heterophylla* the tube is yellow, the expanded part black purple; in *moupinensis* the tube is pale green, the lobes yellow dotted with purplish red. Both have leaves from 3 to 4 inches long and they grow scarcely half as high as *A. Sipho*. All these are easily grown in loamy or peaty soil and blossom in June.

ARISTOTELIA MACQUI VARIEGATA

The typical form of this Chilean shrub is a somewhat dull evergreen only hardy in the warmer counties and not worth wall space in the colder ones. It grows 20 to 30 feet high in Cornwall. Its leaves are ovate, slightly toothed, from 2 to 5 inches long and dark lustrous green. Flowers $\frac{1}{2}$ inch wide, borne in small axillary clusters, pale green, opening in May and June, followed by roundish fruits about the size of a

WALL SHRUBS AND CLIMBERS

pea and at first purple, ultimately black. A kind of medicinal wine is made from them. The flowers are attractive to bees. The plant is only included here because of its

Var. variegata, a form which has its leaves handsomely variegated with yellow and may be recommended as a wall shrub to those who like an evergreen of that character.

ASTERANTHERA OVATA

An evergreen climber growing from 10 to 15 feet high, attaching itself to its support by means of aerial roots. Young shoots very slender and covered with short, pale bristles. Leaves opposite, roundish oval or ovate $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, tapered at the base and with two to five triangular teeth on each side, the upper surface bristly, stalk very slender, $\frac{1}{8}$ to $\frac{1}{4}$ inch long. Flowers mostly in pairs, tubular at the base, about 1 inch long, five-lobed at the mouth and $1\frac{1}{2}$ inches wide, the whole of a rich red.

Native of Chile introduced about 1926. It is often found wild in dense forest growing up tree-trunks and evidently likes shade and moisture. It is successfully grown on a north wall in Col. Messel's garden at Nymans in Sussex, where it flowered in June, 1937. A member of the Gesnera family.

AZARA

Two species of Azara can be grown fully in the open, viz., *A. microphylla* and *A. lanceolata*, but the remainder of those in cultivation need wall protection. They are all evergreen. **A. Gilliesii**, the handsomest of them is, like the rest, a native of Chile. The leaves, holly-like in shape, are 2 to 3 inches long, coarsely toothed and brilliant green. The flowers are densely set in clusters about 1 inch long, yellow, their beauty being due entirely to the stamens and anthers, petals being absent. The plant itself is a shrub or small tree of graceful shape and is so nearly hardy that it may live for a good

AZARA—BERBERIDOPSIS

many years in a sheltered corner of a house without nailing. Blossoms in April and May.

A. integrifolia, so named because its leaves are toothless, has glossy green leaves, roundish or oval, 1 to 1½ inches long and, in the early months of the year, fragrant blossom in small compact clusters, the stamens rich yellow with dark anthers. A variety with leaves variegated in pink and creamy white is more tender and more suitable for a greenhouse.

In the autumn of 1938 this shrub, growing in the open at Exbury near the Solent, was bearing magnificent crops of its globose berries, greyish white with a faint tinge of mauve, about ½ inch wide, each surmounted by a conspicuous, black-purple style.

BERBERIDOPSIS CORALLINA

(*Coral plant*)

Found wild in the forests of Chile, this evergreen scandent shrub is unfortunately tender and, except in the south-west and similarly favoured localities, must be given wall protection. Its heart-shaped, dark green leaves are blue-white beneath, 2 to 4 inches long and spiny toothed. The flowers open during July and the following months in large, quite pendulous clusters, each blossom rather globose, ½ inch wide, with a slender stalk 1½ inches long. An inflorescence may be 4 inches or more long and carry twenty to thirty flowers. The colour is a deep, rich, almost blood red, stalks and all.

This is undoubtedly one of the most splendidly coloured of all the climbers we can grow out of doors. It succeeds best in a peaty soil or an open sandy loam free from lime. It is not self-supporting and it is necessary therefore to nail or tie up leading shoots until the available space is covered. It should then be allowed to grow loosely and unfettered, thinning out the branches if the plants get too lumpy and heavy. It has reached the top of the gardener's house at Carclew in Cornwall. It does not need a sunny wall.

BERCHEMIA

A genus of deciduous, climbing or laxly growing shrubs of which at least four species are in cultivation, none of which have much merit as garden plants. They are rather distinct on account of the numerous conspicuous parallel veins of the leaves. The fruits, sausage-shaped and $\frac{1}{2}$ to $\frac{1}{3}$ inch long, are either red or bluish in the process of ripening, but ultimately become black. The most notable species is *B. volubilis*, the "Supple Jack" of the S.E. United States introduced to England in 1714; it is a twiner with oval leaves $1\frac{1}{2}$ to 3 inches long. The small, greenish white flowers come in clusters 1 to 2 inches long, followed by blue-black fruits. *B. racemosa*, from Japan, has leaves of the same type as the preceding but each of them has only six to eight pairs of veins (*volubilis* has nine to twelve) and the ripening fruit is red.

BIGELOWIA GRAVEOLENS

This is of interest as being a shrub belonging to the Daisy family (*Compositae*) and a very ornamental one. It is a native of hot dry regions in the Western United States and is most happily placed at the foot of a south wall where it gets all possible sunlight. The leaves are up to 3 inches long but only about $\frac{1}{8}$ inch wide, crowded. Flower-heads bright yellow, small individually but borne in flattish clusters 1 to 4 inches across, opening in September and October. An attractive evergreen shrub growing naturally some 6 or 7 feet high, not hardy near London except close to a wall. It may be recommended to those who are interested in unusual and out-of-the-way plants. It likes a light well-drained loamy soil.

BIGNONIA—BILLARDIERA

BIGNONIA CAPREOLATA

The "Cross Vine" of the S.E. United States has been in cultivation in this country for over two hundred years, but is now rarely seen. It is a genuine climber, supporting itself by the prolongation of the mainstalk of its leaves into a branched, curling tendril. It is evergreen or semi-evergreen and grows 50 to 60 feet high in a wild state. Each leaf consists of two leaflets which are oblong-lanceolate 2 to 5 inches long. The flowers are very handsome, opening during June in clusters of two to five, each one funnel-shaped, 2 inches long, $1\frac{1}{2}$ inches across the lobes at the mouth and of a fine orange-red colour, paler inside. In var. *atrosanguinea* the flowers are dark reddish purple and the leaves narrower. This climber loves a good loamy soil and, being tender, should be grown on the sunny side of a house. Even then it is happier and blossoms more freely in the milder counties.

BILLARDIERA LONGIFLORA

This Tasmanian evergreen climber can be grown fully in the open in the milder counties, but in the colder parts it needs the protection of a wall. I have not seen it more than 5 or 6 feet high, so it is quite appropriate for a low wall and may well be recommended to those interested in uncommon plants. The stems are twining, very slender; the lance-shaped leaves 1 to $1\frac{1}{2}$ inches long. Flowers solitary in the leaf-axils, pendulous on slender stalks; the five petals are greenish yellow, so closely set together as to form a tube-like flower $\frac{1}{2}$ inch long. The most beautiful feature of the plant is its fruit, which is $\frac{1}{2}$ to $\frac{3}{4}$ inch long, of a beautiful dark blue and somewhat cubic-globular shape. It flowers in July and the fruits are in colour by September. Introduced in 1810.

A variety with white fruits—*fructu-albo*—is inferior in beauty.

WALL SHRUBS AND CLIMBERS

BOWKERIA GERRARDIANA

An evergreen South African shrub up to 10 feet or more high with the stalkless leaves arranged in threes at each joint and individually 4 to 7 inches long by 1½ to 2½ inches wide; they are toothed and have long, slender points. The viscid inflorescences spring from the leaf-axils and consist of some five or ten flowers loosely clustered at the end of a main stalk 2 inches long. Each flower is about $\frac{1}{2}$ inch wide, yellowish in the bud state, pure white when fully open, the lower part pouched like a calceolaria—to which genus Bowkeria is related.

In the Isle of Wight and similar places this interesting and pretty shrub can be grown fully in the open but inland it must be given wall protection; even then it is not to be successfully cultivated except in fairly mild places. It flowers in August in the Isle of Wight.

BRUNNICHIA CIRRHOSEA

This deciduous climber needs little more than bare mention here. Although curious and interesting from a botanical standpoint, it has not sufficient beauty either of foliage or flower to make it popular in gardens. It grows some 20 feet high, its slender stems supporting themselves by means of tendrils. The leaves are heart-shaped, 2 to 4½ inches long and dark glossy green; the flowers, small and greenish, are borne in a series of racemes near the end of the shoot, the whole forming a loose panicle 1 to 1½ feet long and opening in June and July. It is the only member of its genus and belongs to the Polygonum or knotweed family. Its chief interest is in the seed-vessel being enveloped by the persisting, enlarged calyx and in the flower-stalk developing a membranous wing, $\frac{1}{2}$ inch wide, all down one side and about 1 inch long. Native of the S.E. United States.

BUDDLEIA—BUPLEURUM

BUDDLEIA

The only buddleias worth mentioning in our present connection are *B. auriculata* and *B. Colvilei*.

B. auriculata, a South African species, is an evergreen shrub of lax growth, with narrow, slender-pointed leaves up to 4 or 5 inches long; and very fragrant, creamy-white flowers, opening from September to January in clusters 1 to 2 inches long. Each flower is tubular, $\frac{1}{2}$ to $\frac{1}{3}$ inch long and very downy. This shrub will grow 12 to 15 feet high on a sunny wall and is easily cultivated in any soil of average quality. Its chief value is in its fragrance and in flowering so late in the season. Whatever pruning is needed should be done before growth starts in spring.

B. Colvilei. A deciduous shrub or small tree, this is probably the finest in its blossom of all buddleias; it is fairly hardy at Kew, but will require wall treatment in colder places. The leaves are 3 to 10 inches long and about one-fourth as much wide and the flowers open during June in pendulous trusses 6 to 8 inches long and about half as wide. Each blossom is somewhat funnel-shaped and about 1 inch long, the largest in all cultivated buddleias. Two forms, not apparently distinguished by name, are in cultivation, one rose-coloured, the other maroon-crimson. Native of the Himalaya. This buddleia must not be pruned back annually like the preceding, but merely kept within the necessary limits by removing outstanding branches. It only flowers on matured growths.

BUPLEURUM FRUTICOSUM

(*Shrubby Bupleurum*)

An evergreen or semi-evergreen shrub, 6 to 8 feet high, of spreading, lax growth and with long, slender, purplish young shoots. The stalkless leaves are toothless, 2 to $3\frac{1}{2}$ inches long

WALL SHRUBS AND CLIMBERS

and scarcely half as wide, smooth and bluish green. Flowers yellow, small, borne in clusters 3 or 4 inches wide, opening from July to September.

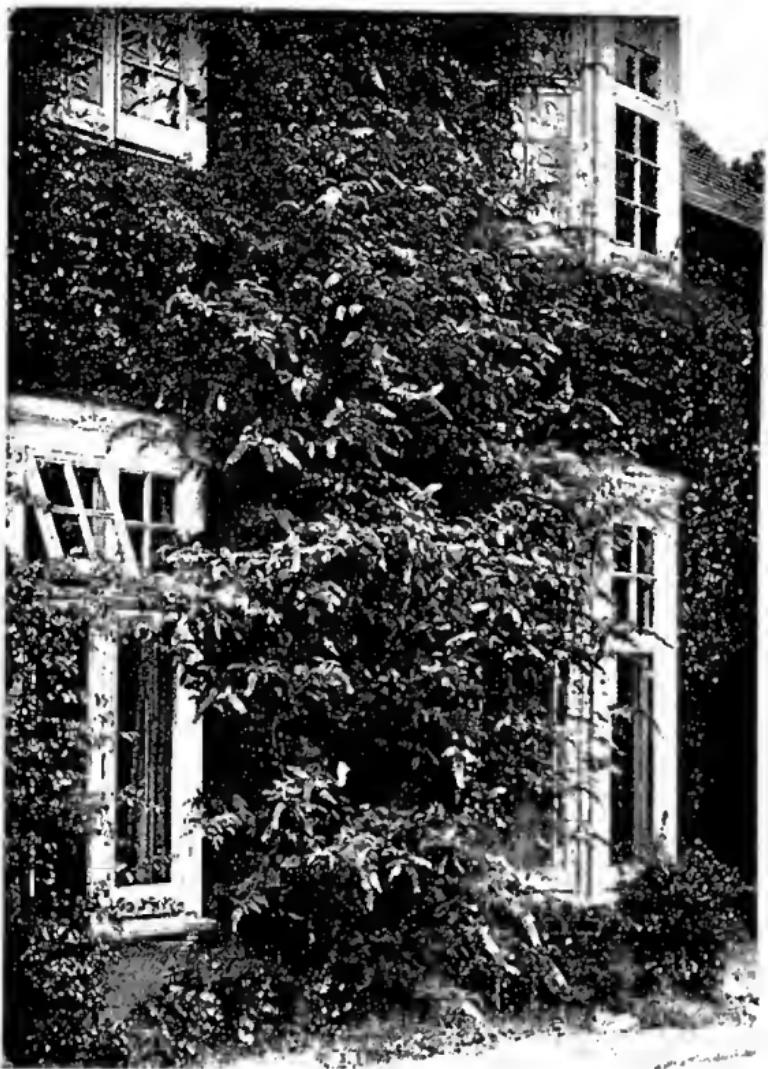
Native of South Europe, this buplever is not hardy enough for the open ground in our average climate, but it succeeds grown on a wall. It is interesting as the only shrubby member of the umbellifers hardy with us and perhaps that is the greatest inducement to grow it, for it is not particularly handsome. It is good for maritime, chalky districts where often it can be grown in the open.

BURSARIA SPINOSA

An evergreen, more or less spiny shrub, or small tree, usually up to 10 or 15 feet high in this country but twice as high in New South Wales and Tasmania where it grows wild. The leaves vary in size and are from $\frac{1}{2}$ to $1\frac{1}{2}$ inches long and about one-third as much wide, often notched at the tip. The flowers are white, fragrant, only $\frac{1}{4}$ inch wide, with narrow petals opening during July and August in profuse clusters up to 6 inches long and 4 inches wide. It is quite attractive in bloom but more so when the numberless, small, pouch-like seed pods referred to in the generic name have assumed their reddish tinge. This shrub must have wall protection in most parts of the country and be allowed to assume a bushy form there, doing such pruning as may be necessary to keep it within desired bounds in early spring. I have seen it excellent in the Vicarage garden at Bitton, near Bristol.

CAESALPINIA GILLIESII

A deciduous shrub or small tree of erect habit belonging to the pea family (*Leguminosae*) whose young shoots are covered with gland-tipped hairs. Leaves about 8 inches long, made up of very numerous tiny leaflets, each about $\frac{1}{4}$ inch



Buddleia Davidii

(Quite hardy but sometimes used as a wall shrub)



CAESALPINIA GILLIESII

CAESALPINIA—CALCEOLARIA

long and $\frac{1}{2}$ inch wide. The flowers, which open in July and August, are borne thirty or forty together on stiffly erect racemes 1 foot or more long. The petals are rich yellow, $1\frac{1}{2}$ inches long, making the corolla as a whole saucer-shaped; from its centre stands erect a cluster of ten scarlet stamens 2 to 3 inches long.

Owing to its tall, slender habit this shrub is best accommodated on the wall of a house where it can grow 20 feet high; it will probably be not more than 3 or 4 feet wide. It comes from the Argentine and must have all available sunshine. In the sunny gardens of Spain it succeeds to perfection and the combination of yellow and scarlet in the flowers makes a brilliant display there.

CALCEOLARIA INTEGRIFOLIA

An evergreen bush up to 4 feet high with velvety, semi-woody young shoots and opposite, oblong leaves 2 to $3\frac{1}{2}$ inches long, less than half as wide, dull green and wrinkled like sage above, grey with down beneath. In spite of the specific name they are mostly finely toothed. Flowers bright yellow, about $\frac{1}{2}$ inch wide, with the typical "pouch" of the calceolarias; they are borne very plentifully during the summer in terminal inflorescences 12 inches or more long towards the summit of which they are arranged in whorls or tiers.

Introduced from Chile in 1822. In the warmer counties this calceolaria succeeds admirably in the open ground, but near London requires wall protection. Even then a light covering of brushwood or canvas during very cold weather is desirable. For a plant so gay and attractive for so long a period this care is well worth while. It flowers from mid-summer until late September.

WALL SHRUBS AND CLIMBERS

CALLISTEMON

The callistemons belong to the myrtle family and, with the exception of two outlying species in New Caledonia, are confined to Australia and Tasmania in a wild state. They belong to the "bottle-brush" section of the family and their garden value is entirely due to the length and colouring of the numerous stamens. The foliage of all the species mentioned below is evergreen and pretty uniform in shape and texture, the leaf being linear to lanceolate, 1 to 3 inches long, several times longer than wide, pointed, leathery, never toothed.

My knowledge of them in the open air has mostly been gained at Exbury, near the Solent, where the following species succeed very well. They are planted at the foot of a sunny south wall, growing luxuriantly there and flowering with great freedom in May and June. The red-flowered kinds are particularly effective. Judging by these plants, it seems evident that they could be grown under similar conditions all along the south coast and, of course, westwards. How far to the north they could be grown on walls will have to be left to experiment, but it is interesting to know that *C. salignus* was grown and had flowered for several years on a south wall at Arnos Grove, Southgate, Middlesex, in 1816. Two species are grown by Major Stern in his chalk pit garden at Hightown, near Worthing.

C. acuminatus is very nearly related to *lanceolatus* but the flowers are of a richer red and certain botanical characters are distinct. June.

C. lanceolatus, a large shrub or small tree in Queensland and N.S. Wales, has a "brush" 2 to 4½ inches long, 1½ to 2½ inches wide and a good red. June.

C. pallidus. Foliage blue-grey, covered with silky hairs; stamens yellow, making "brushes" 3 to 4 inches long by 1½ inches wide. May.

CALLISTEMON—CAMELLIA

C. salignus is 11 feet wide by 10 feet high at Exbury. A very variable species whose yellowish or greenish white stamens form "brushes" 3 inches long.

C. viridiflorus. Probably only a form of *salignus* with green or greenish yellow stamens in "brushes" 2 to 3 inches long. Native of Tasmania.

Probably the handsomest callistemon in cultivation is *C. citrinus* var. *splendens*. Its "brushes" are a fine scarlet, but I have not seen it except in greenhouses.

CAMELLIA

C. japonica. The value of this, the common camellia, as a hardy evergreen is beginning to be adequately appreciated. It is quite hardy in the London district fully in the open, as witness its survival of the great frosts of February, 1895, at Kew, without a trace of injury. Still, for the sake of its early flowers, it is worth some shade and shelter. Farther north it can well be grown on shady, sheltered walls. The smaller-leaved, smaller-flowered *C. Sasanqua* is admirable on a wall, blossoming as it often does before Christmas. The dark shining green leaves are 1½ to 3½ inches long, and the flowers, some single, some double, vary in colour from white and pale pink to rich rose, and in size from 1½ to 3 inches across.

C. Thea (tea plant). In beauty of blossom the tea plant is not equal to either of the preceding, but some people may like to grow it for its interest. It is an evergreen shrub rarely more than 5 feet high, of spreading habit, with narrowish, dull green, toothed leaves up to 4 inches long and fragrant white flowers 1 to 1½ inches wide, coming singly, in pairs, sometimes in threes from the leaf-axils. Hardy in the mildest counties, it needs the shelter of a wall near London. It is a native of various parts of India and the Yunnan province of China. *C. reticulata* is the most beautiful of all camellias, but it can only be regarded as a greenhouse plant in most districts. It

WALL SHRUBS AND CLIMBERS

is grown in the open in Cornwall and similar localities, but I have not seen it succeed even as a wall plant, in less favourable places than mid-Sussex and mid-Hampshire. The flowers are usually 5 or 6 inches wide, of a soft rich rose, semi-double, the numerous wavy petals surrounding a cluster of yellow-anthered stamens. The leaves are 4 to 6 inches long, distinguished among camellias by their dull, not glossy, surface. The camellia known in gardens by this name is a form long cultivated by the Chinese. The wild type has recently been introduced from Yunnan, China. It has smaller flowers with five petals only. Both love shade. Lastly *C. saluenensis* must be mentioned. It was introduced from W. China in 1917, where it is described as an evergreen shrub 10 to 15 feet high. The leaves are up to 3 inches long and about half as wide, and the flowers, of a pale blush pink, are 2 to 3 inches wide. This lovely shrub is found in the same region as *C. reticulata* and will probably require the same climatic conditions. At Caerhays Castle in Cornwall it succeeds admirably on a north wall. It has got into some gardens under the erroneous name of "C. speciosa".

CAMPsis

(*Trumpet Creeper*)

Two species of Campsis (better known in gardens as Tecoma) have long been cultivated in England. They are deciduous and have opposite, pinnate leaves and the flowers, which open in August and September, are amongst the most gorgeous seen in climbing plants. Being very vigorous and making growths several feet long in a season they are not well fitted for restricted spaces. The sunny part of a pergola or the wall of a house is suitable. As they flower on the current season's shoots they can be pruned well back in winter or early spring before growth has started.

C. chinensis (syn. *Tecoma grandiflora*), a native of China,

CAMPSIS—CANTUA

grows 20 to 30 feet high and has leaves made up of seven or nine leaflets which are $1\frac{1}{2}$ to 3 inches long, half as wide, slender-pointed and strongly toothed. Flowers deep orange and red, trumpet-shaped, 2 to 3 inches long and as much wide at the mouth, produced during August in pendulous panicles of up to, or more than, a dozen blossoms. This is the finer species of the two, but is scarcely as hardy as radicans. It likes a hot, sunny wall and, producing aerial roots but sparsely, requires support by nailing or tying.

C. radicans from the S.E. United States is better known in gardens than its Chinese counterpart, having been introduced close on 300 years ago. It usually produces aerial roots freely and provided a suitable surface (like a wall) is available to which they can attach themselves, the shoots can be almost self-supporting. Usually, however, artificial support is necessary, especially for older plants. The leaves consist of seven to eleven leaflets, each averaging from $1\frac{1}{2}$ to 3 inches long, with a long, slender point, and coarsely toothed. Flowers tubular-funnel-shaped, $2\frac{1}{2}$ to 3 inches long, with spreading lobes at the mouth giving it a diameter of $1\frac{1}{2}$ inches, scarlet and orange; they come in clusters of four to twelve. The flowers differ from those of *grandiflora* in being more tubular and less wide at the mouth; the calyx also is more deeply lobed. (Syn. *Tecoma radicans*).

Var. *flava* has orange yellow flowers, and var. *praecox* commences to flower in June. Var. *Madame Galen* with salmon red flowers is grown successfully fully in the open at Borde Hill in Sussex.

C. hybrida (syn. *Princei*) is a hybrid between the two species. Its flowers are orange-scarlet.

CANTUA BUXIFOLIA

(*C. dependens*)

An evergreen shrub of bushy habit growing 6 to 15 feet high

WALL SHRUBS AND CLIMBERS

in a wild state, all the parts more or less downy. The leaves are very variable in shape; on the leafy shoots they are 1 to 2 inches long, deeply lobed at the sides, dull green. On the flowering shoots they change to a much smaller size and become entire, box-like and $\frac{1}{2}$ to $\frac{3}{4}$ inch long. The blossoms come in pendulous clusters of four to eight and the end of the shoot. Flowers 3 inches long, the long tubular base bright rose, with streaks of a darker hue; at the mouth are five spreading lobes, rich red and giving a diameter of 1 to $1\frac{1}{2}$ inches; they open in April and May.

This gorgeous shrub is a native of the Peruvian Andes and in most parts of the country requires greenhouse conditions. In the extreme south and west it can, however, be grown on a wall. I remember to have seen it in Lord St. Leven's garden on St. Michael's Mount and at Tregye in Cornwall. It is very well worth trying in any likely place. A wall 6 or 8 feet high would suit it.

CARPENTERIA CALIFORNICA

An evergreen shrub 6 to 15 feet high and naturally of bushy shape. The opposite, usually toothless leaves are up to $4\frac{1}{2}$ inches long and 1 inch or a little more wide, dark bright green above, pale beneath. The flowers, which open in June and July, resemble individually single white roses, but they come in clusters of three to seven; they are 2 to 3 inches wide, with five rounded petals. The cluster of very numerous stamens with their yellow anthers make a fine conspicuous centre to the flower. Altogether, this is a very handsome and notable shrub when in bloom. It is not quite hardy in our average climate without wall protection, but this it well deserves and on a wall grows up to 15 feet high. The back branches may be tied or nailed to the wall and the front part left free to grow 1 to 2 feet from it. It grows easily in light loam and loves the sun.

CEANOOTHUS

CEANOOTHUS

All the finest of the ceanothuses have flowers of some shade of blue, the rarest colour amongst hardy shrubs, and they are, in consequence amongst the most attractive and sought after for wall cultivation. Most of them are quite hardy in the southern parts of Hampshire and Sussex, but in the major part of Britain they require the protection of a wall.

The genus is confined to North America and the most ornamental as well as the most numerous species come from California. They are divisible into two well-marked sections: (1) those that flower in summer and autumn on the growths of the current year, and (2) those that flower in spring and early summer on the growths made the previous year. It is with the second section that we are chiefly concerned here, because the first group are mostly fully hardy and rarely need any protection; it consists largely of hybrids amongst which the one called "Gloire de Versailles" is perhaps the best known.

Coming from very sunny places, all the ceanothuses naturally enjoy as much sunshine under cultivation as they can get, but whilst a southern exposure is best for them, they succeed very well on walls facing east or west. They can be grown in any well-drained soil, but a light loam is best. Such pruning as they require should be done as soon as ever the flowers have lost their beauty, and it need only be sufficient to keep the plants within reasonable limits. It may usually consist in shortening back the most forward standing branches, leaving the inner ones to grow on untouched.

All the species here mentioned are evergreen and the flowers individually are always very small—about $\frac{1}{2}$ inch wide—with outstanding stamens.

C. dentatus. A species distinguished by its small leaves which are usually $\frac{1}{2}$ to 1 inch long, set alternately on the shoot, pinnately veined and downy underneath, the margins

WALL SHRUBS AND CLIMBERS

decurved. The bright blue flowers open in May or June in rounded clusters about 2 inches long. *C. floribundus* is a form of *dentatus* with globular clusters of rich blue flowers.

C. integerrimus. As the name infers, the leaves of this species have no teeth; they are 1½ to 3 inches long, two-thirds as wide, with three conspicuous veins running lengthwise, dull bluish green. The flowers open in June in large panicles 9 to 12 inches long and 3 to 4 inches wide and they vary in shade from white to pale blue. Although the colour is less striking than in most of the kinds here mentioned, the plant gives a fine display when in bloom owing to the size and profusion of its panicles. It is usually only partly evergreen.

C. Lobbianus. A natural hybrid between *thyrsiflorus* and *dentatus* introduced from California about 1852, but it appears not to have been found wild again. It has bright blue flowers and is a very handsome wall shrub. It is much confused in gardens with *Veitchianus* but is well distinguished by the three basal veins of its leaves and by the blue flowerstalks being downy.

C. papillosum. In the warmer counties where it can be grown fully in the open this makes a wide-spreading shrub 10 or 12 feet high; it requires therefore a fairly high wall to do itself justice. The leaves are very distinct in their comparatively narrow shape, being up to 2 inches long but only ½ inch wide; also in the shining upper surface being covered with curious wart-like excrescences to which the specific name refers. The flowers open in May in abundant clusters 1 to 1½ inches long and of a pleasant blue. An attractive, free-growing species.

C. rigidus. This species is well distinguished from all the others mentioned in these notes by its leaves being arranged on the twigs opposite each other in pairs, all the others having them set alternately; they are also quite small and only ¼ to ½ inch long. There are two forms in cultivation, both with blue flowers. The one called *pallens* has flowers of a clearer

CEANOOTHUS—CELASTRUS

shade, its flowerstalks are longer and its leaves are more strongly toothed. It is superior to the original type whose flowers are tinged with purple and whose leaves are often toothless. Introduced in 1847 from the coast ranges of Central and South California, this species is more tender than most of those mentioned here, but is nevertheless quite happy grown against walls. Both forms flower from April to June. There is also a white flowered variety—albus.

C. thrysiflorus. The typical form of this species is hardy enough to be grown unprotected in the open near London and in places with a similar climate, so need not be further discussed here. But a variety of it called griseus is more tender and needs wall protection. Naturally it is a small tree of vigorous growth, its glossy leaves $1\frac{1}{2}$ to 2 inches long and three-fourths as much wide. The flowers are pale lilac and come in large clusters during May. Although the flowers are not so highly coloured as in most of the kinds here noted, the plant makes a fine display. A distinctive character of this and all forms of *C. thrysiflorus* are three veins springing from the base of the leaf and running upwards.

C. Veitchianus. Another natural hybrid (see also *Lobbianus*) introduced about 1852. One of its parents is *thrysiflorus*, the other is doubtful, but it may be *rigidus* or *dentatus*. It is now perhaps the most popular of this group, being so nearly hardy that it survives ordinary winters in a sheltered spot. Naturally it is a spreading bush 10 feet or so high, with leaves about 1 inch long, glossy above, greyish beneath, the bright blue flowers being profusely borne in clusters 1 to 2 inches long. Often confused in gardens with *C. Lobbianus*, it can be distinguished by its quite smooth flowerstalks (downy in the other).

CELASTRUS

Nearly all the celastruses are deciduous and genuine climbers, the branches supporting themselves by twining round their

WALL SHRUBS AND CLIMBERS

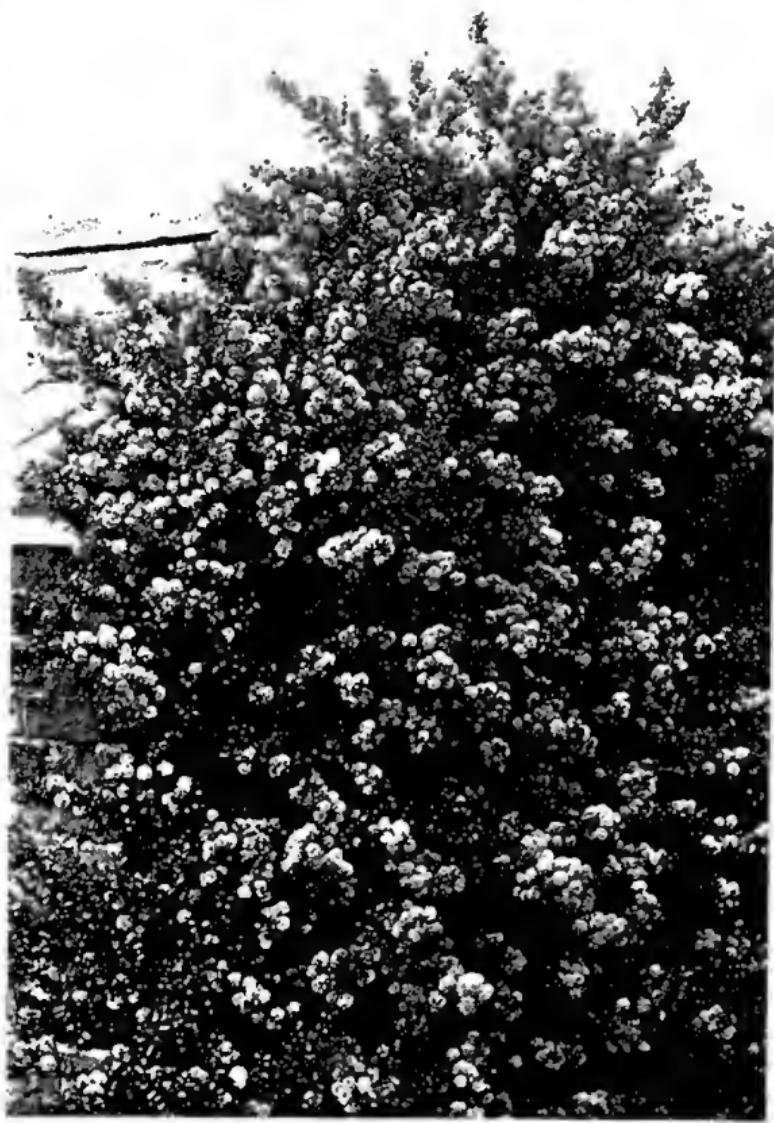
supports. Naturally they are most frequently found growing over trees or large bushes, and in gardens a sickly or failing tree may usefully be given up to them. Otherwise they may be grown on pergolas or over branched limbs of oak fixed in the ground. They are related to the spindle trees (*Euonymus*) and like them are not greatly attractive in blossom, the flowers being small and of some shade of greenish yellow or greenish white. Their beauty is in their seed-vessels, which at first are similar to a large pea in size and shape; when ripe they acquire an orange-yellow colour and split into three sections revealing thereby the brightly coloured inner surface and the bright red or even brilliant scarlet of the seeds within. In this state they make one of the most beautiful garden features of autumn and early winter.

They are of easy culture, very hardy and, when once established, grow vigorously in any reasonably good soil. Seeds afford an easy means of propagation.

About a dozen species are in cultivation, the earliest to arrive in this country being the N. American *C. scandens*, which was introduced in 1736. One of its interesting natural sites is Goat Island, just above Niagara Falls. At its best it is very good, but *C. orbiculatus* (syn. *articulatus*) is more amenable to our climate and gives larger and more regular crops of fruit. Good Chinese species are *C. Loeseneri*, *C. rugosus* (notable for its warty twigs) and *C. hypoleucus* (with leaves blue-white beneath). All these have yellow seed-vessels and scarlet seeds. The leaves also turn a good yellow before falling.

CESTRUM

In the milder parts of the southern and western counties may be grown on walls the beautiful Mexican evergreen shrub—*Cestrum* (or *Habrothamnus*) *elegans*. It is naturally a bush 10 feet or more high with red-stalked, long-pointed, ovate leaves 3 to 5 inches long, 1½ to 2 inches wide. Flowers



CEANOTHUS VEITCHIANUS



CLEMATIS LASURSTERN (Deep Blue)

CESTRUM—CHIMONANTHUS

rosy pink, tubular, $\frac{3}{4}$ inch long, $\frac{1}{2}$ inch wide, closely packed and numerous in terminal clusters 2 inches across. Fruits globose, $\frac{1}{2}$ inch wide, reddish purple. In our cooler localities this is usually grown in greenhouses but it succeeds out-of-doors in many parts of Cornwall. Messrs. Hillier of Winchester state they grow it on an east wall where 20 degrees of frost have not injured it. In Cornwall it flowers more or less at all seasons. The fruits, I believe, are not often seen in this country.

C. aurantiacum, from Guatemala, is, like the preceding, mostly seen in greenhouses, but may be grown on walls in the south-western counties. It is a deciduous or semi-evergreen shrub probably 10 to 12 feet or even more high, with bright green leaves 2 to 4 inches long, half as wide, tapering towards both ends. The flowers have a tube about $\frac{1}{2}$ inch long with five very reflexed lobes at the mouth; they are orange-coloured and pleasantly fragrant, produced in axillary racemes 2 inches or more long towards the end of the shoots. It blossoms with great freedom and is very ornamental from August onwards for several weeks.

C. Parqui, a Chilean species, is grown in a sheltered nook at Kew formed by the walls of a greenhouse, where it is quite happy. It is a deciduous shrub some 10 feet or more high, with lance-shaped leaves $1\frac{1}{2}$ to 5 inches long, and clusters 4 to 6 inches long of greenish yellow flowers opening in June and July. They are not very pretty but interesting in being fragrant at night only—a device, no doubt, to secure their fertilization by attracting night-flying moths.

CHIMONANTHUS FRAGRANS

(*Winter Sweet*)

Introduced from China in 1766, this shrub has ever since been a favourite because of the charming fragrance of its blossom. It is a perfectly hardy, deciduous shrub 8 to 10

WALL SHRUBS AND CLIMBERS

feet high in the open ground where it flowers in early spring, but is usually grown against a sunny wall because there (except in our colder parts) it begins to flower in November or December and keeps on intermittently through the next three months when the weather is favourable. The bright green leaves are 3 to 6 inches long, up to 2 inches wide, pointed and curiously harsh to the touch above. Flowers about 1 inch across, the outer segments yellow, the inner ones purplish; they have no striking beauty but will always be cherished for their fragrance and earliness. Var. *grandiflora* is a stronger grower with larger leaves and flowers, the latter of a better yellow but less fragrant. Var. *lutea* is distinct in having the inner parts of the flower yellow instead of purplish. The *chimonanthus* is very difficult to propagate by cuttings, but it can be layered. It should be pruned not later than March by shortening back strong shoots and cutting out weak and over-crowded ones.

CLEMATIS

There is no cultivated hardy genus of genuine climbers which in its combined beauty of blossom, variety, and number of species equals Clematis. Altogether over two hundred species are known and the genus is represented to some extent in all the great terrestrial areas of the globe, but only a very small proportion of them interest us here. One species, *C. Vitalba* (Traveller's Joy) is very common on the hedges and in the copses of the chalky parts of southern England where its grey, fluffy seed-clusters make a conspicuous feature in autumn and early winter. It is scarcely suitable for the garden proper, but its rapid, dense growth makes it useful for covering overhead trellis-work or other constructions where summer shade is wanted.

The flowers of clematises have no true petals, the showy parts being really sepals, usually four, but sometimes up to

CLEMATIS

as many as eight in number. There is one section of the genus called Atragene in which there comes between the stamens and the calyx a ring of organs which may be considered either deformed petals or abortive stamens. This section is best known by the violet-blue-flowered *C. Alpina*, very familiar to travellers in the mountains of Switzerland and Italy in June.

Other characteristic features in this genus are (1) the curious means by which the climbing species (there are several herbaceous, non-climbing ones) support themselves by curling their leafstalks round whatever is available; and (2) the distinctive seed-vessels which often develop a slender apex 1 to 2 inches long, feathered with silky hairs.

The clematises present no real difficulties as regards cultivation. They grow best in a good loamy soil which, if not naturally limey, can be brought more to their liking if mortar rubbish or some other form of lime is added. The chief problem is to provide them with suitable support. In nature they grow over bushes or small trees with their roots in the cool moist shade; and a similar position can often be found for them in gardens by planting on the shady side of a shrub of no particular consequence, or even to grow over a small tree like a laburnum, which is very suitable because its branching is open enough to show the flowers effectively. When once attached, they need no further attention. Although they like their roots and lower parts of their stems in shade, the upper, flowering parts should be in full sunshine. They are, of course, well adapted for furnishing pergolas, and they can be grown on stakes or, much better, rough untrimmed branches of trees (preferably oak) stuck in the ground.

Pruning. The ordinary wild species need pruning only if they are outrunning their space. When this happens they should be cut back in early spring or, in the case of early-flowering

WALL SHRUBS AND CLIMBERS

species like *C. montana*, immediately after flowering, at the same time clearing away dead or rubbishy growths.

There is however the large-flowered group of hybrids and varieties raised in our nurseries and gardens to be considered. They constitute by far the best known, most beautiful, and, for amateurs generally, the most important section of the genus. They have been raised from three Japanese or Chinese species, viz., *florida*, *lanuginosa* and *patens*. To the same class belongs *C. Jackmanii*, said to be a hybrid between *lanuginosa* and *C. Hendersonii*. If allowed to grow over bushes or small trees as recommended above, they need no systematic pruning, but often they are grown on walls or up rough stakes in borders and then pruning may be desirable. The *florida* and *patens* group of varieties flower in June; they need no pruning beyond a clearing out of old or superfluous growths. The *Jackmanii* group, which flower on the current season's shoots, may, if necessary through want of space, be pruned well back in early spring before growth commences. The *lanuginosa* group also may be pruned in early spring but (being less vigorous) nothing like so severely. For amateurs generally the *Jackmanii* and *lanuginosa* groups are much the most important; the other groups may well be left to those who specialize in the genus. A few kinds of approved merit are mentioned under the notes on each species (q.v.).

C. alpina (*Atragene alpina*). A charming deciduous species found wild on the mountains of S. and Central Europe where it is seen growing over stunted bushes and in the crevices of rocks. It is not a strong grower, rarely more than 6 feet high and is therefore easily accommodated. The four sepals are blue, tinged more or less with purple and give the flower a diameter of 3 inches or more. Between the sepals and the stamens comes a ring of abortive, petal-like organs which do not add much to the beauty of the flower but distinguish



A

CLEMATIS FLAMMULA



CLEMATIS NELLIE MOSER
(LANUGINOSA TYPE)

CLEMATIS

this species and *C. macropetala* from all the others here mentioned. The flowers are solitary and open in May with us, but in June on its native mountains. (See also *C. macropetala*.)

C. Armandii. A vigorous evergreen climber from Western China growing 20 to 30 feet high whose leaves are made up of three rather leathery, oblong leaflets, each 3 to 6 inches long. The flowers are pure or creamy white, 2 to 2½ inches wide in the best forms, and produced during April in large dense clusters, making then a very fine display. This clematis is not particularly hardy and succeeds best on a south wall where it should be allowed to form a loose tangle, extending its area by attaching shoots to the wall. Before purchasing plants, their quality as regards size of blossom should be ascertained, for they vary considerably in this respect, some of the forms being poor in comparison with the best. One called "Apple blossom" is very good. Any pruning necessary, and it will be in regard to space only, should be done as soon as the flowers are past.

C. campaniflora. A native of Portugal, whence it was introduced in 1810, this deciduous climber has been unduly neglected. It is very free and vigorous, growing 20 feet or more high and blossoms copiously in July and August. The four sepals are about $\frac{1}{4}$ inch long and being only half expanded give a flower a pseudo-bell-shaped form. The colour is a pale lilac. The smallness of the individual blossom is compensated for by their profusion. It is very good in Messrs. Wallace's nursery at Tunbridge Wells and is admirable for growing over a decrepit bush or small tree.

C. Flammula. A deciduous climber up to 10 feet or more high, forming a tangle of slender branches and much appreciated for the charming fragrance of its blossom which is strong enough to be perceptible yards away from the plant. The leaves consist of three or five leaflets very variable in size and shape, $\frac{1}{2}$ to 1½ inches long, sometimes lobed, green

WALL SHRUBS AND CLIMBERS

and smooth on both sides. Flowers pure white, $\frac{1}{2}$ to 1 inch wide, borne from August to October numerously in large clusters. It is a native of S. and E. Europe and has been grown in England for nearly 350 years.

A hybrid between *C. Flammula* and *C. Viticella* is known as *C. rubro-marginata*. It is very like the former in general appearance and its flowers are equally fragrant, but the sepals, white at the base, are reddish violet towards the tips. A charming climber for a cottage wall.

C. florida is the type of a group of those large-flowered varieties which constitute the best known kinds in gardens. It is a native of China. Its solitary flowers are 3 inches wide, opening in June and July; sepals four to six, creamy white, with a conspicuous ring of purple stamens in the centre. The distinctive character of this species are two bracts about the middle of the flower-stalk. Varieties belonging to this group are: Lucie Lemoine and Duchess of Edinburgh, both white and the latter fragrant; John Gould Veitch and Venus Victrix, lavender. Var. *Sieboldii* has flowers "doubled" by the transformation of the stamens into purple, small and petal-like organs; sepals white. A remarkable and rare clematis of Japanese garden origin. The picture shows an admirably grown plant. (Syns. *C. florida* var. *bicolor*; *C. Sieboldii*.)

C. indivisa. A vigorous evergreen climbing species introduced in 1840 from New Zealand, where it clammers over bushes and trees. The leaves are trifoliate, the ovate leaflets $1\frac{1}{2}$ to 3 inches long, bright green and smooth. The flowers are each 2 to 3 inches wide, pure white, produced in panicles 4 to 12 inches long, the flower-stalks $1\frac{1}{2}$ to $4\frac{1}{2}$ inches long. Each flower has six to eight sepals, narrowly oblong, $\frac{1}{2}$ to $\frac{1}{4}$ inch wide; stamens yellow with rose-coloured anthers.

In the majority of gardens this clematis, the most beautiful of white-flowered species, has to be given protection under glass. But I have seen it successfully grown on a wall



B

CLEMATIS FLORIDA SIEBOLDII



CLEMATIS WILLIAM KENNEDY (Mauve)

CLEMATIS

in South Surrey and a plant in the woods at Exbury, rambling over a cotoneaster bush, is in perfect health and of almost matchless beauty and grace when in flower. The plants are unisexual, and a New Zealand botanist has told me that, as seen in the wild, the male plants are the more beautiful. The variety *lobata*, with deeply lobed leaves is also superior. All the forms bloom in May.

C. Jackmanii. On the whole this, with the varieties of its group is the most satisfactory clematis from the amateur's point of view. It is inferior to none in floral beauty and, of the large-flowered groups, it is the most amenable to cultivation. It is generally considered to be a hybrid raised in Jackman's nursery at Woking about 1860 by crossing *C. lanuginosa* with *C. Hendersonii* (a herbaceous hybrid), but this parentage has been disputed. It will grow 10 feet or more high and produces flowers 4 to 5 (sometimes 6) inches across, of a rich velvety violet-purple, with four to six petals. It commences to flower in July and keeps on for several weeks. On healthy plants their abundance is amazing. The best plant I have ever seen grew on a laburnum to whose branches it had become firmly attached. Varieties that may be recommended are: Gipsy Queen, like the type but of a deeper shade; *Jackmanii alba*, white; *Perle d'Azure*, blue; *Oriflamme*, violet-red. Flowering as they do on the summer shoots, the *Jackmanii* group may, if needful, be pruned back to within a foot of the older wood. When grown on small trees pruning will seldom be needed.

C. lanuginosa. As already intimated, this species, introduced from China in 1850, is the type of one of the groups of the popular large-flowered clematises. Next to the *Jackmanii* group it is the most important of them, and it comprises varieties bearing the largest of all clematis flowers. They are usually 6 to 8 inches wide. The leaves are either simple (i.e., in one piece) or consist of three leaflets, and in

WALL SHRUBS AND CLIMBERS

the type are covered beneath with a thick wool, a distinguishing character to which the specific name refers. The flowers are very "full" and the six to eight sepals of which each is composed usually overlap. The wild plant is said to be about 6 feet high but cultivated varieties are often taller. The original forms of *lanuginosa* had flowers white or pale lilac, but selection and hybridization have brought in other shades. Thus Blue Gem and Beauty of Worcester are blue, *Lawsoniana* rosy purple, Lady Northcliffe lavender, King Edward VII puce-violet with crimson bars. Henryi and Madame Boisselet are good whites. Little or no pruning is needed. The flowering season is from June to October.

C. macropetala. A deciduous climber capable of growing up to 8 feet high, with leaves composed usually of nine leaflets, each of which is $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, coarsely toothed. The flowers are pendulous, solitary, $2\frac{1}{2}$ to $4\frac{1}{2}$ inches wide, blue or violet-blue. There are four sepals, but between them and the stamens comes a cluster of about a dozen petal-like segments shorter than the sepals and paler in colour; they give a distinctly "double" appearance to the flower and one so distinct from the ordinary wild clematises that this species and the less ornamental *C. alpina* were once kept apart in a separate genus named "Atragene". It is a handsome plant for furnishing a low wall and flowers from May to June onwards. Found wild in North China and Siberia; introduced by Farrer about 1914. It is charmingly grown on a lowish wall by Dame Alice Godman at South Lodge, Horsham.

C. montana. Of the pure species, this Himalayan one is not far from being the best, if hardiness as well as beauty be considered. It is quite hardy near London, is a vigorous climber reaching at least 20 feet in height, and flowers in May. The leaves have three leaflets and from their axils are produced several (as many as five) of the white flowers, each on its own stalk and 2 to $2\frac{1}{2}$ inches wide. A plant in full

CLEMATIS

bloom is almost completely draped with blossom. Some of the finest plants in this country are grown on verandahs, the main stems being supported, but long streamer branches allowed to hang free. Pruning should be done as soon as the flowers are past.

Var. rubens is very distinct and beautiful in the rosy red of its flowers and in the purplish colour of its leaves and young growths. This is a native of China and rather hardier than the Himalayan type; it is unfailing in its production of flowers in May. Var. Wilsonii has white flowers, but they are larger (fully 3 inches wide) and do not open till July or August.

C. patens. This is the third of the large-flowered species (see *florida* and *lanuginosa*) which, with the hybrid *Jackmanii*, form the popular groups of garden varieties. It is a native of Japan, whence it was introduced in 1836. A deciduous climber growing up to 12 feet high, it has leaves consisting of three or five leaflets, each 2 to 4 inches long and slightly downy beneath (not woolly as in *lanuginosa*). The flowers are 4 to 6 inches in width and have six to eight sepals varying in colour from white to violet or purple. This species, which blossoms in May and June, can be distinguished from *florida* by having no bracts on the flowerstalk. Named varieties are: Duke of Edinburgh, purple; Fair Rosamund, bluish-white; Miss Bateman, white with brownish red bars; Stella, pale violet; Lasurstern, deep blue. Beyond the removal of dead and spindly growth no pruning is needed.

C. tangutica. Yellow-flowered species of clematis are so rare that mention of this species from Central Asia cannot be omitted. It is not a strong climber and is rarely more than 10 feet high, its pale green leaves much divided. The flowers are as much as 4 inches across, the four sepals narrowish and long-pointed and of a clear, rich yellow. Other yellow-flowered species are *C. orientalis* and *C. glauca*, but *tangutica* is the best.

WALL SHRUBS AND CLIMBERS

C. Viticella. This species, a native of S. Europe, is only partially woody in this country and much of the summer's growth dies back the following winter. It is advisable, therefore, in spring to prune the branches back to the living part. It grows 8 to 12 feet high and its much divided leaves have leaflets $\frac{3}{4}$ to $2\frac{1}{2}$ inches long. The flowers are solitary on their stalks or in threes, each $1\frac{1}{2}$ to 2 inches across and opening in July and August; the four sepals are blue, purple or rosy purple. This clematis is known to have been cultivated in England in 1569 and several varieties of it have been raised, also several hybrids between it and other species. Of the former: alba with white, coerulea with blue, Leonidas with purple, and kermesina with wine-red flowers are all worth cultivation.

CLEMATOCLETHRA

A genus of deciduous climbers related to *Actinidia* of which but little is as yet known in cultivation. Plants are only rarely offered by nurserymen.

C. scandens grows 20 to 30 feet high and has its young shoots covered with bristles; leaves 2 to 5 inches long and about half as wide, bristly on the veins beneath. Flowers produced in June in clusters of three to six from the leaf-axils, white, $\frac{1}{2}$ inch wide, each developing a globose red berry $\frac{1}{2}$ inch wide.

C. integrifolia has glabrous shoots and its leaves are glaucous beneath; flowers white and fragrant. It grows 20 to 25 feet high. *C. lasioclada* has downy young shoots, white flowers as many as seven in a cluster, each $\frac{1}{2}$ inch wide, and globose black fruits $\frac{1}{2}$ inch wide. All these are natives of Western China and were first introduced in 1908.

CLETHRA

I do not remember to have seen either of the species of Clethra mentioned below cultivated against walls. But they

CLETHRÆ

are the two most beautiful species of this genus that we have in gardens and both are more or less tender. Provided with suitable conditions as regards warmth they are very easily grown, rejoicing in a peaty soil or an open loam free from lime. Pruning should be done after the flowering season is past and should consist in thinning out superabundant or too outstanding growths.

C. arborea is the "folhado" of Madeira and the "lily-of-the-valley tree" of our gardens. It has long been valued for conservatories and as an outdoor small tree in Cornwall and S.W. Ireland. It is succeeding well also in the Hebridean island of Colonsay. An evergreen tree from 20 to 30 feet high or a large shrub in these places, it has finely toothed, pointed, glossy dark green leaves, 3 to 6 inches long and 1 to 2 inches wide, tapering slenderly to a stalk $\frac{1}{2}$ to 1 inch long which, like the young twigs, is covered with tawny down. The fragrant flowers open from July and August onwards and are produced abundantly in a cluster of racemes 3 to 6 inches long. The pure white corolla has five petals pointed forwardly enough to give it a cupped shape $\frac{1}{2}$ inch wide. The individual flowers and their close setting on the raceme are rather lily-of-the-valley like. In such places as S. Sussex and S. Hampshire this clethra should succeed on a fairly high wall. It has been in cultivation since 1784.

C. Delavayi. A deciduous Chinese shrub from 12 to 30 feet high according to those who have seen it in its wild state. The leaves, tapering towards both ends, are 2 $\frac{1}{2}$ to 6 inches long, 1 to 2 $\frac{1}{2}$ inches wide, toothed, distinctly parallel-ribbed, very downy beneath. The racemes terminate the shoots, are 4 to 7 inches long, closely set with flowers all more or less pointing downwards, thereby giving the raceme a one-sided character. The flowers are white somewhat cream tinted, $\frac{1}{2}$ inch wide, very closely packed on the main-stalk; they open from late July to September.

WALL SHRUBS AND CLIMBERS

Whilst not quite hardy enough to be a success fully in the open ground near London, this clethra begins to be hardy in S. Surrey and thence southward and westward. It is, for instance, admirable at Wakehurst, near Haywards Heath. It would seem to be well worth trying on walls in places where it cannot show its best in the open.

CLANTHUS PUNICEUS

(*Glory Pea, Parrot's Bill*)

A luxuriantly leafy, evergreen climber up to 20 feet high, introduced from New Zealand in 1831. The leaves are 3 to 6 inches long, pinnate, and carry from one to two dozen of dark green, oblong leaflets, $\frac{1}{2}$ to $1\frac{1}{2}$ inches long. The flowers open in early summer in clusters springing from the leaf-axils and are of a brilliant red. They have the same structure as those of a pea but are very much larger, the erect, back petal ("standard") being $1\frac{1}{2}$ to 2 inches long and the forward-pointing ones forming the "keel" 2 to $2\frac{1}{2}$ inches long and curved something like a parrot's bill.

This very handsome plant needs the protection of a wall and even then is killed during very hard winters near London. But for the gardens of Sussex and Hampshire and thence westward no more interesting or striking wall plant exists. Even in colder districts, by covering the plant with a mat or screen of some kind in severe weather, its existence would be considerably prolonged. It likes an open loamy soil.

Var. *albus* has creamy white flowers and is not so handsome as the type, but when seen at its very best, as it is in Lord Aberconway's garden at Bodnant in N. Wales, it is really striking.

COCCULUS

Three species belonging to this genus are grown in the open-air in Britain. One is an evergreen shrub or small tree; the two others are deciduous twining climbers, one from North

COCCULUS

America, the other from Eastern Asia. The sexes are on different plants. The two climbers can be grown on rough branches of oak stuck firmly in the ground, to the smaller parts of which they will securely attach themselves. They love the sun and crops of fruit are always more plentiful after a hot summer.

C. carolina. Carolina Moonseed. This is the North American representative and a native of the S.E. United States. It climbs by its slender, twining, downy stems some 12 to 14 feet high, the leaves being heart-shaped or ovate, often three-lobed, 2 to 4 inches long, downy beneath. Flowers borne in slender panicles $1\frac{1}{2}$ to 4 inches long, each blossom $\frac{1}{2}$ inch wide, followed in the female plant by globose red berries, each about $\frac{1}{2}$ inch long. A rare species in cultivation.

C. trilobus. Of similar general appearance to the preceding and twining to a similar height of 12 to 14 feet, this is a native of Eastern Asia and differs in having black fruit, covered with a bluish bloom. These fruits are globoses about $\frac{1}{2}$ inch wide, closely packed in roundish clusters, and very copiously borne and ornamental after a sunny summer.

C. laurifolius. This is very different from the two species just described. It is an evergreen shrub or small tree native of the Himalaya. It was grown for many years on an old wall at Kew and is chiefly remarkable for the brilliantly glossy, dark green colour of its foliage. Each leaf is from 5 to 8 inches long, up to 2 or $2\frac{1}{2}$ inches wide, pointed, with three conspicuous veins running from base to tip. It rarely flowers, but that is no great loss, as the blossom is quite small. Its value is in the brilliant green of its foliage which many people may consider not sufficient to justify a place for it on a wall, especially if space is not plentiful. In its favour, however, is the fact that at Kew it was excellent on a wall facing north.

WALL SHRUBS AND CLIMBERS

COLQUHOUNIA COCCINEA

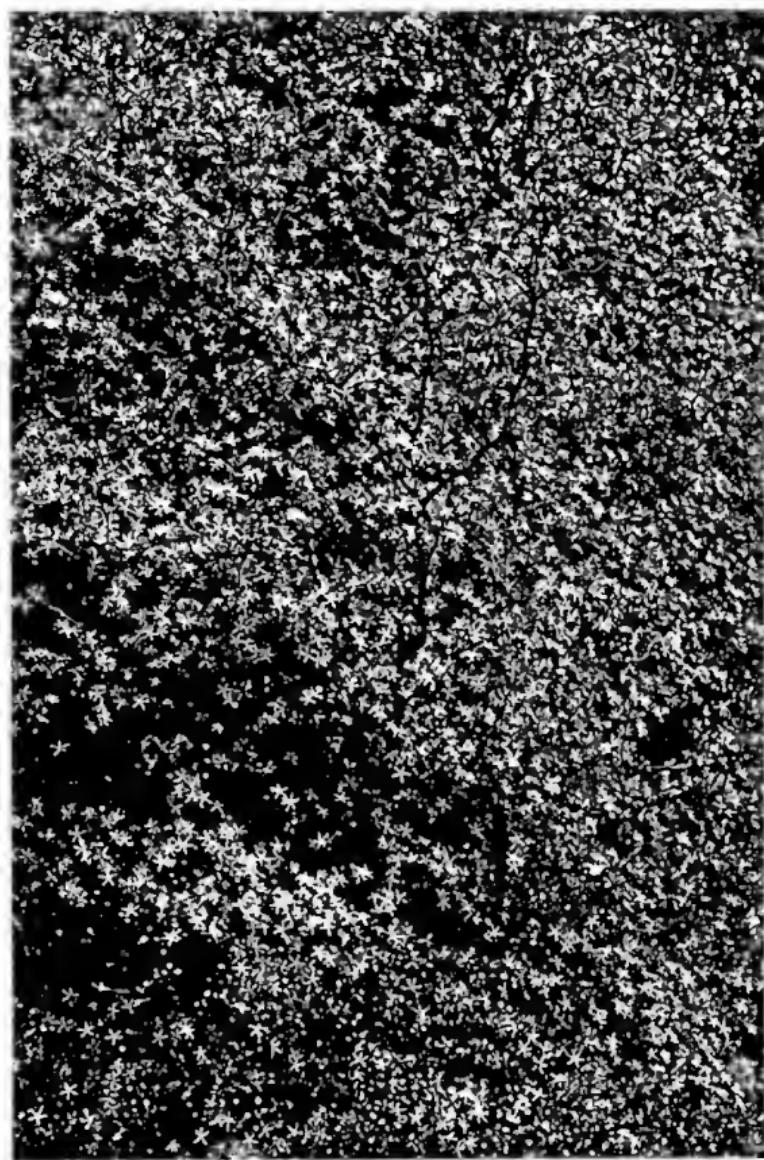
This is a shrub of loose growth, too tender in most districts for the open ground, but quite successful against a wall. It is usually seen 5 or 6 feet high but in mild districts is capable of reaching 10 feet. It has downy leaves up to 8 inches long and 5 inches wide, but they are mostly smaller. The blossom comes in a panicle up to 1 foot long at the end of each shoot. Flowers scarlet or orange-red, 1 inch long, funnel-shaped at the base, the mouth two-lipped as is usual in the dead-nettle family, to which it belongs. A variety called *vestita* is much more woolly.

Native of the Himalaya. It is useful in flowering as late as from August to October, but is rather rank in growth and one cannot include it amongst the very best wall shrubs. It is adapted for growing at the base of a wall rather than being attached to it other than by the leading shoots. Lord Wigram grows it successfully in his garden at Windsor Castle.

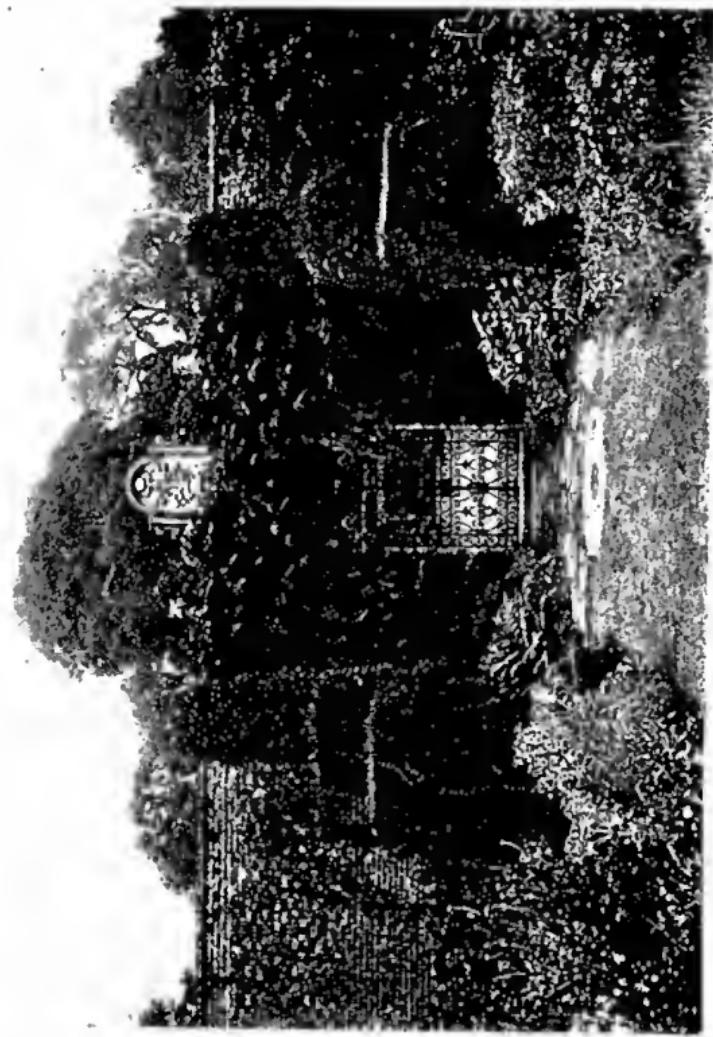
COROKIA

Four species, all evergreen and bearing yellow flowers and all native of New Zealand are in cultivation. None of them is absolutely hardy fully in the open near London, but *C. Cotoneaster* is nearly so. This is a bush up to 8 feet high, remarkable for the thin, wiry, tortuous and entangled twigs which turn very dark at maturity, also for the small, spoon-shaped leaves only $\frac{1}{2}$ to $\frac{3}{4}$ inch long. The flowers, opening in May, are star-shaped, bright yellow, $\frac{1}{2}$ inch wide, often three or four of them in a leaf-axil. Very interesting and attractive as a wall plant near London.

C. buddleoides is distinct in producing its flowers in a terminal cluster and its leaves are much larger, viz., $1\frac{1}{2}$ to 5 inches long, but only about $\frac{1}{2}$ inch wide. *C. macrocarpa* also has bigger leaves—2 to 4 inches by $\frac{1}{2}$ to 1 inch—and flowers



COROKIA COTONEASTER



COTONEASTER HORIZONTALIS OVER GATEWAY

COROKIA—COTONEASTER

$\frac{1}{2}$ inch wide, produced from the leaf-axils in racemes. *C. virgata* is about as hardy as *C. Cotoneaster* but is of taller, looser habit with leaves up to $1\frac{1}{2}$ inches long. The flowers often come in threes and are nearly $\frac{1}{2}$ inch wide. All these are quite hardy in the south-west counties and blossom in May and June, *C. buddleoides* probably the tenderest.

CORONILLA

There are two evergreen species of *Coronilla* too tender to be grown fully in the open but which are capable of being grown in a sheltered nook on the sunny side of a house, especially if a temporary covering with a mat could be given them in very cold weather.

C. glauca, the better known one, is a bush capable of growing 10 feet high, but usually (and by pruning can be kept) much smaller. The glaucous leaves are made up of five or seven leaflets, each about $\frac{1}{2}$ inch long and the rich yellow, pea-shaped flowers are borne in clusters of six to ten, opening from April to June, with often a small supplementary crop in autumn. Individual flower about $\frac{1}{2}$ inch long. Native of S. Europe.

C. valentina, the other species, closely resembles *glauca*, but is dwarfer, has more leaflets (up to eleven) to a leaf and more flowers in a cluster. Probably rather more tender. Native of S. and E. Europe, cultivated in England in 1596. Ordinary peaty or loamy soil.

COTONEASTER

This is a large and popular genus of shrubs and small trees, some of which are prostrate but none, strictly speaking, climbing; nor are any of them tender or in need of protection. But the two following have some claim to be included here.

C. horizontalis. Naturally of low flat habit when planted in open ground, this cotoneaster has the curious and useful faculty of growing close to the face of wall when planted at

WALL SHRUBS AND CLIMBERS

its base. Often it requires no artificial support. It is therefore very useful for furnishing a low wall up to 6 feet high. I have, however, seen it 10 feet high. It is deciduous, but often retains some of its leaves until the New Year; the foliage, however, begins to fade in November and dies off gradually into shades of orange and red. Then, combined with the red fruits, it makes a pretty picture. The branching is curious on account of the branches growing in two flat opposite ranks—a kind of fish-bone arrangement especially noticeable when all the leaves have fallen. The leaves are roundish oval, $\frac{1}{2}$ to $\frac{1}{4}$ inch long, pointed, glossy dark green. Flowers white, flushed pink, $\frac{1}{4}$ inch wide. Fruit globose, red, $\frac{1}{2}$ inch wide. It succeeds well against a north wall. Native of China.

C. microphylla. This is a low, prostrate evergreen of wide-spreading growth, introduced from the Himalaya in 1824. Its stout-textured leaves are $\frac{1}{2}$ to $\frac{1}{4}$ inch long and about half as much wide, rounded or notched at the apex, dark shining green. The flowers, as in nearly all cotoneasters, are white, $\frac{1}{4}$ inch wide, and they are followed by globose, scarlet-red fruits, $\frac{1}{2}$ inch in diameter.

If desired, this evergreen can be trained up a north wall by fixing the leading shoots as occasion offers. It is still better, however, for planting at the top of a retaining wall, such as that of a ha-ha, so that it may grow downwards.

CYDONIA LAGENARIA

(*C. japonica* of gardens; Japanese Quince)

This well-known deciduous shrub, introduced from Japan in 1796, is quite hardy in open, unsheltered ground and flowers freely enough there, but it is often planted and is most valued as a wall shrub, because, with that protection, it not only blossoms more copiously but considerably earlier. It is not uncommon for it to show flowers before Christmas, its

CYDONIA—CYTISUS

full season, however, being from February to May. In the original type brought from Japan the flowers, about $1\frac{1}{2}$ inches across and produced in clusters of two to four, are scarlet to blood-red. But many varieties have been raised in nurseries and plants may be obtained with flowers ranging from white to rich crimson. A very pretty one called aurora has them rose-coloured suffused with yellow; cardinalis has them rich crimson; in alba they are white tinged with rose.

This quince is easily grown in ordinary loamy soil and pruning may be done in late summer by shortening back the long shoots made during the growing season. The flowers are always produced on "spurs" (short, stunted growths) on shoots one or more years old.

CYTISUS

(*Broom*)

There is in the Canary Islands a group of brooms very distinct from the commoner types and of them

C. proliferus may be taken as the representative one. It is evergreen, of very lax growth and will reach a height of 15 feet if grown against a wall. The leaves are of the usual trifoliolate character, the flowers white, 1 inch long, opening during April in axillary clusters of four to seven. Near London this broom is not permanently hardy even against a wall although it may survive mild winters. It is hardy in the southwest where, on account of its lax habit, it is often grown on walls. A free-flowering plant, very pretty and graceful when in bloom, and useful for a tall narrow space.

Var. "Miss Wingfield" is an improved form with flowers of a purer white, raised at Pendrea, Penzance, by the lady after whom it is named. Two other species of similar character are **C. palmensis** and **C. Perezii**, both from the same group of islands. The young shoots of all these brooms are used for cattle fodder in the Canaries.

WALL SHRUBS AND CLIMBERS

C. supranubius also from the Canaries, is a very distinct broom with little or no foliage, but with bare, erect shoots resembling those of Spanish broom (*Spartium junceum*), only stouter. The flowers open in May in axillary clusters and are white with a tinge of rose, each flower about $\frac{1}{2}$ inch long. This fine broom is scarcely hardy near London but may be grown against a wall, or, still better, in a sunny corner made by the junction of two walls.

C. Battandieri, a handsome species from the Atlas Mountains of Morocco at 5-6,000 feet, is proving hardy near London, but for northern gardens it would be safer to give it a place on a sunny wall, at any rate for some years. It is a deciduous shrub 15 feet or more high with stout young shoots covered with silky down. The trifoliolate leaves have leaflets $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long, about half as much wide, covered on both surfaces with silky hairs that give them a beautiful silvery green. The fragrant, rich yellow flowers come during June in clusters 5 inches long at the end of young leafy shoots. In some ways, especially in size, this is the most impressive of all the brooms.

C. monspessulanus. Montpelier Broom. A native of several of the countries bordering the Mediterranean, this handsome broom is rather tender for the open ground in the home counties. But I have seen it very charming growing at the foot of cottage walls. In such a position it is an evergreen shrub of free growth attaining a height of 6 feet or more and flowering in April or May. The blossoms are like those of our native broom in shape and are produced very copiously in clusters of six to nine; each blossom is about $\frac{1}{2}$ inch long and glowing yellow.

Compared with the English broom this is much more leafy and denser in growth, the flower colour is quite as brilliant and it is, of course, evergreen. The leaves are made up of three leaflets $\frac{1}{2}$ to $\frac{1}{4}$ inch long. It is well adapted for

CYTISUS—DECUMARIA

growing on a low wall or for filling gaps at the base of higher ones which have been left vacant by tall climbers. Only leading shoots need be tied or nailed to the wall and a poorish soil is better than a rich one.

C. Porlock is a fine hybrid raised by Mr. Norman G. Hadden of Porlock, between *monspessulanus* and the beautiful, well-known, but tender *C. racemosus*. It will, no doubt, require wall protection and even then only be safe probably south of London. It is very free flowering and beautiful, the flowers, of course, yellow; and it will grow up to 10 feet high in favourable situations. Blossoms from April to September.

DAPHNE ODORA

This is an evergreen shrub, naturally about 5 feet high, with smooth dark shoots and narrow leaves up to $3\frac{1}{2}$ inches long, about one-third as much wide, pointed, tapered towards the base, and dark green. The red-purple, short-stalked flowers are closely packed, six to ten together, in a terminal cluster 1 to 2 inches across, each flower $\frac{1}{2}$ inch in diameter. It is pretty in blossom but its greatest charm is in its sweet fragrance; daphnes are noted for their deliciously perfumed flowers and this is one of the very best in that respect. It is a native of China and Japan and is hardy enough in the south-west but needs shelter in colder districts. Our picture shows it quite pleasing grown against a low wall. Very similar to it is *D. Dauphini* (syn. *D. hybrida*) presumably a hybrid between *odora* and *collina* and distinguished from the former by its downy blossoms; it is also rather hardier but will need a wall in cool districts. Flowers March to April.

DECUMARIA

The two species of Decumaria are self-clinging climbers belonging to the saxifrage family and most closely related to *Hydrangea* and *Schizophragma*.

WALL SHRUBS AND CLIMBERS

D. barbara, from the S.E. United States, is deciduous or semi-evergreen and will grow to a height of 30 feet. Its opposite, mostly pointed leaves are 3 to 5 inches long and about half as wide, smooth and glossy above. The flowers, white, fragrant and individually small, open in June and July in terminal clusters of 3 or 4 inches across, scarcely so long.

D. sinensis is of Chinese origin and was introduced in 1908. It is evergreen, the leaves being 2 to 3 inches long, about half as wide, more tapered at the base than towards the bluntnish apex. The creamy white flowers are small ($\frac{1}{2}$ inch wide) produced in clusters sometimes 4 inches high and 3 inches wide, but usually smaller. They open in June and are faintly scented. These are not showy plants but interesting as two of the few evergreen climbers clinging to walls or tree trunks by means of aerial roots. Both species grow well in ordinary soil and are best on an east or west wall.

DENDROMECON RIGIDUM

Introduced from California about 1854, this half-woody, erect-growing shrub has ever since been valued for its bright yellow flowers which continue to open for several months during the summer. It belongs to the poppy family (Papaveraceae) the flowers being 2 to 3 inches wide with four petals, fragrant, and each on a stalk 1 to 3 inches long. It is a tender plant and in our average climate must be grown close to a sunny wall in well-drained, loamy soil; it dislikes shade and excessive moisture. In favourable climates it will grow 15 feet high, but is usually 5 to 7 feet with us; its young stems and leaves are both of a glaucous hue. On the whole it may perhaps be regarded as a plant for the connoisseur and the lover of the out-of-the-ordinary-way plants for it does not appear to be very long-lived.

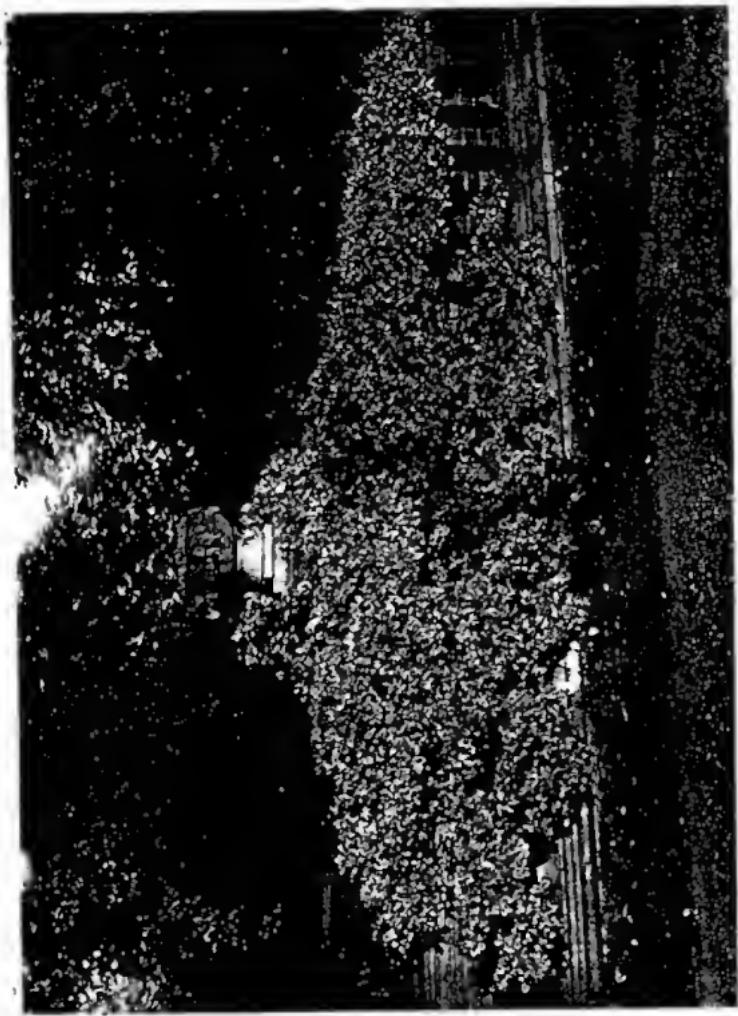
DESFONTAINIA SPINOSA

A holly-like, evergreen shrub introduced from Chile in 1843



DAPHNE ODORA

See page 80



VARIEGATED EUONYMUS RADICANS

DESFONTAINIA—DICENTRA

and very popular in the milder counties of the south and west. In these places it will grow as much as 10 feet high. The leaves are opposite, thereby differentiating the shrub from holly (which has them alternate), up to 2½ inches long, the margins armed with sharp triangular spines, shining dark green. Flowers funnel-shaped, 1½ inches long, crimson-scarlet with five shallow lobes at the mouth. They are produced singly from the leaf-axils from July onwards to autumn.

This very handsome shrub can only be grown satisfactorily against a wall in our average climate and one rather shaded or facing north-west is suitable. It does not require strong sunshine. A moist peaty or loamy soil suits it and it does not object to lime. Its cherry-like fruits contain numerous small black seeds by means of which it is easily propagated.

DICENTRA CHRYSANTHA

Being mostly of an herbaceous or semi-herbaceous character and only woody at the base, this plant can only be called sub-shrubby. It sends up growths during summer from its base which, with the flower panicles at the top, give it a height of 2 to 4 feet, then die down again towards the base the following winter. The pale, glaucous leaves are up to 12 inches long, 4 to 6 inches wide, subdivided at least thrice into ultimately very numerous narrow segments ½ to 1 inch long, $\frac{1}{16}$ to $\frac{1}{8}$ inch wide and of the same structure as those of the well-known "Dutchman's breeches" (*D. spectabilis*); they differ, however, in being erect instead of pendulous.

Native of S. California on dry hills. It first flowered in this country in Veitch's nursery at Exeter in 1852 but has never been common. Perhaps it is naturally short-lived. Requiring as much sun as it is possible to give it, it should be grown at the foot of a sunny wouth wall in lightish, well drained soil. Its whitish, much divided foliage and its fine

WALL SHRUBS AND CLIMBERS

panicles of yellow blossom make it very handsome. Blossoms from June or July onwards.

DICHOTOMANTHES TRISTANICARPA

An evergreen shrub or small tree up to 20 feet high, introduced from the Yunnan province of China in 1917. It has privet-like leaves up to 4 inches long (mostly smaller) clothed beneath with pale, silky hairs. The white flowers are each $\frac{1}{4}$ inch wide; opening in May and June in terminal clusters 2 inches across. The most interesting part of this shrub is the fruit which is itself a dry, oblong vessel $\frac{1}{4}$ inch long, but is almost completely enclosed by the persisting fleshy calyx. This is a plant for the connoisseur and lover of out-of-the-way species. It requires the protection of a wall near London.

DIOSPYROS KAKI

This is the deciduous tree of medium size which produces the fruits known as "Kakee" or "Chinese persimmon", several varieties of which are grown in S. Europe; these fruits are frequently on sale in London shops. In Britain apparently it can only be got to bear fruit by growing it against a sunny wall. In 1935 a plant so grown at Kew bore hundreds of fruits.

The leaves are oval, 4 to 6 inches long, half as much wide, strongly veined and bright green, and the tomato-shaped fruits are about 3 inches wide, yellow when ripe, with the calyx still adhering at the base. Harsh and astringent in an unripe state, they have to become almost over-ripe to be palatable. The taste for "persimmons" is perhaps an acquired one, but many people find them excellent eating.

DIPLACUS GLUTINOSUS

Also known as *Mimulus glutinosus*, this is an evergreen bush up to 4 or 6 feet high with glutinous young shoots. The

DIPLACUS—DRIMYS

dark shining green leaves are oppositely arranged, 2 to 4 inches long, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, with recurved margins. Flowers successively borne singly in the leaf-axils of the young shoots as they grow, trumpet-shaped, the tubular part 1 to $1\frac{1}{2}$ inches long, spreading at the mouth into five lobes and giving each blossom a width of $\frac{1}{2}$ inch, yellow or orange.

Native of California, southwards of San Francisco. It requires a sunny wall and then perhaps is only likely to be a success in the warmer southern counties. The colour varies from white to pale salmon red (in var. *grandiflorus*), whilst in var. *puniceus* it is cinnabar red. A handsome shrub that flowers continuously through the summer.

DISCARIA TOUMATOU

A New Zealand shrub or small tree producing long, slender branches strongly armed with stiff, sharply pointed spines, 1 to $1\frac{1}{2}$ inches long and as stout as the twigs from which they spring. The leaves are small and inconspicuous being narrow and only $\frac{1}{2}$ to $\frac{3}{4}$ inch long, and sometimes so few as to be scarcely noticeable. The flowers are borne very profusely in clusters during May, each blossom $\frac{1}{2}$ inch wide and white with a tinge of green. This shrub, which is only to be recommended to lovers of curious species, requires to be grown against a sunny south wall.

DRIMYS WINTERI

(*Winter's Bark*)

This beautiful evergreen, introduced from Chile in 1827, is unfortunately not wholly hardy near London, but it can be successfully grown as a wall shrub. There appear, however, to be forms in cultivation that are hardier than others. This is probably to be accounted for by the extended latitudinal habitat of the species which is found in Tierra del Fuego in the south and is said to extend northwards to Brazil; also by

WALL SHRUBS AND CLIMBERS

the various altitudes at which it is found. A small-leaved variety called *andina* is found at high elevations in the Andes.

The leaves in the commonest cultivated form are from 5 to 9 inches long, quarter to one-third as wide, pointed, bright green above; more or less glaucous beneath. Flowers ivory white, fragrant, about $1\frac{1}{2}$ inches wide and produced during summer in loose clusters several inches wide. The whole plant, especially the bark and leaves, is strongly aromatic. Samples of the former were brought home to England by Winter, captain of one of Drake's ships, from the Magellan Strait, in 1578. It is said to have anti-scorbatic properties.

Drimys Winteri grow exceedingly well in the south-west where plants 30 to 40 feet high are not uncommon. It grows very well in either loamy or peaty soil. A form with leaves considerably more glaucous beneath than usual was raised by the late Mr. P. D. Williams at Lanarth, Cornwall.

ECCREMOCARPUS SCABER

A semi-woody climber growing 6 to 12 feet high with slender stems and opposite, pinnate or doubly pinnate leaves, the numerous leaflets $\frac{1}{2}$ to 1 inch long, the main stalk ending in a tendril by means of which the stems support themselves. Flowers produced from June onwards in racemes of up to a dozen blossoms which are tubular but swollen on one side and contracted towards the mouth, bright orange red, 1 inch long. A native of Chile, introduced in 1824.

This climber is not hardy fully in the open where it can, however, be grown as an annual on pea-stakes. It produces seed in plenty which if sown under glass in February will produce plants that, once potted, can be put out in late May and will commence to flower the following month. It

ECCREMOCARPUS—ERCILLA

has to be a very mild winter that this plant will survive near London unless it has wall protection. In Chile it scrambles over bushes and in our warmer counties it might be given similar accommodation, for it is very handsome.

ELAEAGNUS GLABRA

In Great Britain we almost always see this evergreen as a loose, rather rambling shrub, but on the Continent, especially in the more sunny parts, it is not infrequently planted as a climber on houses whose walls it clothes densely with its glossy, dark green foliage. It is also planted to scramble through and over trees. The leaves are 2 to 4 inches long, shining dark green above, the lower surface brown and shining with a metallic lustre, well distinguishing the species from the commoner *E. pungens* whose leaves are dull whitish beneath sprinkled thickly with brown spots. The tubular flowers are white inside, brown outside, $\frac{1}{2}$ inch or so long, inconspicuous but fragrant. They open in October and November. I do not recommend it as a house climber, but it would be interesting growing over a tree. Native of Japan and Central China.

ERCILLA VOLUBILIS

An evergreen climber introduced from Chile in 1840 by a collector named Bridges. It was called *Bridgesia spicata* in his honour about that time and this name is still often given to it, but the one here adopted is the older one. The stems are slender and emit aerial roots by which, in nature, they cling to tree trunks and rocks. The leaves are $\frac{1}{2}$ to $1\frac{1}{2}$ inches long and about two-thirds as much wide, of fleshy texture and glossy. The dullish white flowers open in March and April; individually they are $\frac{1}{2}$ inch wide but thickly arranged in clusters 1 to $1\frac{1}{2}$ inches long. This climber is quite hardy on a wall where, if left alone, it will form a heavy

WALL SHRUBS AND CLIMBERS

tangle of shoots that needs occasionally thinning out. It is interesting as one of the comparatively few evergreen self-supporting climbers, but it has no great beauty.

ERIOBOTRYA JAPONICA

(*Loquat*)

Naturally a tree 20 feet or more high, this remarkable evergreen needs wall protection in our average climate, although in Cornwall and similar places it thrives fully in the open. The foliage is very fine, the larger leaves varying from 8 to 12 inches in length and in width from 3 to 5 inches; they are strongly framed with sunken parallel ribs, brilliant dark green above, furnished with thick, reddish brown wool beneath. The flowers, white and fragrant, open during autumn in woolly panicles 3 to 6 inches long, but have no great beauty. They are not often seen in our ordinary climate and still more rarely seen are the yellow, pear-shaped fruits each about 1½ inches long. The latter are edible but require the sun of Southern Europe to make them palatable. The loquat is well worth its place on a wall for its noble leafage and unique appearance. Owing to its size and vigour a fairly high wall is desirable. Introduced from Japan in 1787, but a native of China.

ESCALLONIA

Whilst all the species of Escallonia can be fully grown in the open in the warm south-western counties there is scarcely one evergreen species which is perfectly hardy near London. The hardest are *E. rubra* and *E. punctata* and even they are occasionally cut back to ground level in severe winters. There is one quite hardy deciduous species, *E. Philippiana*, and several hybrids raised from it are also hardy. The genus is confined to S. America and belongs to the saxifrage family.

ESCALLONIA

The leaves of the evergreen escallonias do not vary much in size and are mostly from 1 to 3 inches long and are nearly always toothed. The flowers, made up of five, spoon-shaped petals are very distinct. The base of each petal is extended to form a slender stalk occasionally $\frac{1}{2}$ inch long, and, although they are free from each other, they stand erect and close enough together to form an imitation tube enclosing the stamens and pistil; each petal has at the top a broad, spreading enlargement giving the flower a diameter of $\frac{1}{2}$ to $\frac{3}{4}$ inch.

For forming a handsome, dense, evergreen covering of a wall 10 feet or more high, there is nothing to surpass *E. macrantha* which, to the beauty of its dark glossy green foliage, adds the attraction of rich rosy-red flowers during summer. *E. montevidensis* and *E. pterocladon* bear clusters of fragrant white flowers and make admirable wall shrubs. *E. Iveyi* is a very handsome, white-flowered hybrid raised at Caerhays between *E. montevidensis* and *E. exoniensis*, the latter itself a hybrid between *pterocladon* and *rubra albiflora*. *E. Iveyi* is remarkable for the brilliant black green of its foliage. Equaling *E. macrantha* in the beauty of its rosy red flowers is *E. organensis*.

As regards soil, the escallonias are easily satisfied, growing in loamy or peaty soil of average quality, nor are they adverse from lime. Most of them blossom in late summer and autumn and the pruning of wall-grown plants should be done by thinning out, after flowering, the stronger shoots which are beginning to stand out too far from the wall.

The hybrids referred to above as being raised from the hardy deciduous *E. Philippiana* are Donard Beauty, rosy red; Donard Brilliance, red tinted crimson; Donard Gem, pale pink; Donard Seedling, pale pink, becoming white; all very beautiful. Hardy in many places, especially in the

WALL SHRUBS AND CLIMBERS

south, they may require (or at any rate, be better) with wall protection in the north. They are all very charming.

EUCRYPHIA BILLARDIERI VAR. MILLIGANII

The typical *E. Billardieri* is probably too large a tree for most walls, for its is described wild in Tasmania as usually 40 to 50 feet, occasionally 80 to 100 feet high. Milligan's variety, a dwarf form of the species, grows from 6 to 20 feet high and is mostly of shrubby habit. Leaves opposite, oblong, $\frac{1}{2}$ to 1 inch long by about one quarter as much wide, round-ended, dark bright green above, glaucous beneath. Specimens collected on the Tasmanian Mountains are very box-like. The flowers are produced singly from the leaf-axils and are $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, pure white, fragrant, with a fine cluster of yellow-anthered stamens in the middle. It blossoms in July and August.

It is found in Tasmania up to altitudes of 3,500 feet. Where it is quite hardy, as in South Sussex and South Hampshire, it is always charming for its neat evergreen habit, but especially so when starred with its pure white flowers.

EUONYMUS RADICANS

Very well known as a prostrate evergreen in British gardens, this shrub is capable of being used as a climber in very cold districts. In Massachusetts, where the ivy is not particularly hardy, it is planted for furnishing the walls of houses and one may see it there so used 20 to 25 feet high. It might be planted similarly in the more inclement parts of our islands. It is a native of Japan.

The stems are minutely warted and produce aerial roots. The leaves in the juvenile state of the plant are $\frac{1}{2}$ to $1\frac{1}{2}$ inches long and about half as wide, dark green, smooth and wavy-margined. Like the ivy it completely changes its character when it reaches the adult or flowering state. It then acquires

EUONYMUS—FABIANA

a stiff and shrubby form of growth, ceases to climb, the leaves become larger and they then (as well as the flowers and fruit) resemble *E. japonicus*. As a clipped wall shrub it remains in the juvenile, aerial-rooted state. The veins of the leaves are usually pale and in var. *picta* are quite white. There are several handsomely variegated forms.

FABIANA

Fabiana imbricata whose beauty has long been appreciated in the warmer parts of the British Isles, was introduced from Chile in 1838 and is an evergreen shrub ultimately about 8 feet high and as much wide, erect in growth. The leaves are very tiny, only about $\frac{1}{12}$ inch long, triangular in cross section and so densely packed on the twig as to hide it. The pure white flowers are tubular to funnel-shaped, $\frac{1}{2}$ to $\frac{3}{4}$ inch long, and about $\frac{1}{2}$ inch wide at the mouth. A single flower is borne at the end of each of the very numerous short twigs. The shrub flowers very freely as a rule and is in full beauty in June. I have never seen it better than in the Worthing district, especially on the flat country between the foot of the South Downs and the sea. It is not hardy fully in the open near London but can be kept, often for a very considerable number of years, by planting it in a sheltered corner facing south or south-west close to a wall, especially if given a temporary covering in severe weather.

F. violacea is closely related to *imbricata* but is well distinguished by the colour of its flowers which evidently varies, having been termed "violet", "pale mauve", "harebell blue" and "blue-lilac". The plant itself is more spreading in habit and promises to be somewhat hardier than *imbricata*, but cultivated plants have only had some ten or twelve years in the open air, during which they have been put to no very severe test. Native of Chile.

Both these shrubs succeed in a loamy soil of average

WALL SHRUBS AND CLIMBERS

quality and well drained. Although in general appearance, also in blossom, they resemble heaths, they belong to the Solanum (potato and tomato) family.

FALLUGIA PARADOXA

This shrub, a native of the dry, sun-burnt hills of New Mexico, Utah and Nevada, whence it was introduced in 1877, can only be recommended to connoisseurs and those particularly interested in rare plants. It belongs to the rose family and is a deciduous shrub of loose habit 2 to 6 feet high. The leaves, each about $\frac{2}{3}$ inch long and made up of three to five narrow lobes, are arranged in clusters on the slender white branchlets. Flowers white, rose-like, 1 to $1\frac{1}{2}$ inches wide, opening in July, solitary or a few at the end of the branchlet; stamens numerous, with yellow anthers. The seed vessels are each terminated by a feathery tail 1 to $1\frac{1}{2}$ inches long, the whole forming an attractive silky cluster. This plant must be grown against a sunny wall in perfectly drained soil. In such a place at Kew it has flowered for many years past.

FEIJOA SELLOWIANA

A large evergreen, very bushy shrub up to 20 feet high in Cornwall, but only adapted for wall cultivation in colder districts. It succeeds admirably on a wall at Kew. The young shoots, the underside of the leaves and the flowerstalks are covered with a whitish felt. Leaves opposite, 1 to 3 inches long, about half as wide; dark glossy green above. Flowers solitary, $1\frac{1}{2}$ inches wide, borne in the lower leaf-axils of the current year's shoots in July. The four broadly oval, concave petals are red in the centre, whitish at the margins, finally deflexed. The great feature of the blossom is the cluster of very numerous, erect stamens $\frac{1}{2}$ to 1 inch long and rich crimson. Native of S. Brazil and Uruguay. It belongs to the myrtle family.

FEIJOA—FICUS

This very handsome and distinct wall shrub is quite easily cultivated. Pruning should be done as soon as the flowering season is over and may consist in taking out the more outstanding growths so as to keep the plant reasonably close to the wall. Suitable only for spacious walls.

FENDLERA RUPICOLA

A native of the S.W. United States, whence it was introduced in 1879, this deciduous shrub is naturally a sun-lover and in our climate needs the help of a wall to bring out its best qualities, and it should be a wall facing south or south-west. It grows from 3 to 6 feet high, its slender, downy shoots furnished with pointed, three-veined, opposite leaves $\frac{1}{2}$ to $1\frac{1}{2}$ inches long and rough to the touch above. The white or faintly rose-tinted flowers are about 1 inch across and have four rather spoon-shaped petals; they open singly at the end of short twigs, in May and June. This shrub is supplied by nurserymen, but is rather rare in cultivation. At its best it is very ornamental. It belongs to the saxifrage family.

FICUS STIPULATA

(*Climbing Fig*)

Well known in greenhouses (usually under the name of *Ficus repens*) as an evergreen climber clinging by its aerial roots closely to damp walls, this fig may be used for covering walls out-of-doors in the milder counties. It grows up to 40 feet high on Knapp Castle, near Horsham, also on St. Matthew's Church at Chelston, near Torquay. Its young shoots are thin, wiry and bristly. Like the ivy and other self-clinging climbers, this fig alters its character when it reaches the adult or fruiting state. In its juvenile form, which is the best known, the heart-shaped leaves are 1 inch or rather more long, flattened against the wall, scarcely stalked, and dull green; this is the state in which it is seen in greenhouses and in which it never produces fruit. The adult state only comes (as

WALL SHRUBS AND CLIMBERS

in the ivy) when it ceases to climb and then occurs an extraordinary change in its character. The shoots become stout, the leaves thick and leathery, 2 to 4 inches long, strongly net-veined beneath. The fruit, not frequently seen in this country, is of the ordinary fig shape, 2 to 3 inches long, green, then orange, finally reddish purple.

Native of China and Japan; introduced in 1771.

FORSYTHIA

All the forsythias are of course perfectly hardy and all except one are of sturdy habit and best grown quite in the open. The exception is the variety of *F. suspensa* named *Sieboldii*, a native of China, but introduced to Europe in 1833 from Japanese gardens. It is deciduous and will grow 20 feet or more high, and its shoots are long, slender and pendulous, furnished during the summer with opposite, pointed, toothed leaves 2 to 4 inches long and about half as much wide. The golden yellow flowers open in April, the corolla being 1 inch or a little more wide and divided into four oblong lobes. From two to six blossoms are borne at each joint of the previous summer's growth.

When grown against a house front or wall, the leading shoots will have to be supported. Pruning, which consists in cutting back the shoots that have flowered, should be done as soon as ever they have lost their beauty. To delay this work is to curtail the growing season. The forsythias love abundant sunshine and a rich loamy soil. Few shrubs give so long a season of beauty as the forsythias and given reasonably favourable weather they will retain their beauty three or four weeks.

FREMONTIA

F. californica is the better known of the two species of Fremontia which constitute the genus. It was intro-

FREMONTIA—FREYLINIA

duced from California in the early "fifties" of last century and is a small tree 15 to 30 feet high, naturally of rounded, bushy shape. The lobed leaves are 2 to 4 inches long, not quite so wide, the lower surface covered with a brownish white felt. Flowers 2 to $2\frac{1}{2}$ inches across, golden yellow, of stout rather waxy texture; there are no petals, the five divisions of the flower being really sepals. A curious feature of the blossom is the union of five stamens into a short column at the base, but radiating at the top.

This exceedingly handsome and distinct plant is not wholly hardy near London, but given a sheltered sunny nook it will, with a succession of mild or moderate winters, make a bush 10 feet or more high, flowering freely from late May to July. In the north it is necessary to give it genuine wall treatment, that is to say, the leading shoots should be nailed to it. It likes an open loamy soil and is easily raised from seed which it ripens freely. It is difficult to transplant and should be grown in a pot (but not allowed to become "pot-bound") until given a permanent place. The second species,

F. mexicana, introduced in 1926, is a native of Lower California and is more tender than the other; it has even been killed on a wall at Kew. It is very similar to *F. californica* both in leaf and flower, but the latter is larger and more orange-tinted. Its growth is much quicker and softer and it will flower at less than one year old. Both are evergreen or semi-evergreen and neither requires a rich soil; a poorish one is better.

FREYLINIA CESTROIDES

An evergreen shrub up to 12 feet high, introduced from South Africa in 1774. It has opposite leaves 2 to 5 inches long but only $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, slender-pointed. Flowers produced in slender panicles 2 to 4 inches long at and near the end of the branches, the whole forming a compound inflorescence up to

WALL SHRUBS AND CLIMBERS

10 inches long and 4 inches wide. The flowers are about $\frac{1}{2}$ inch long and $\frac{1}{8}$ inch wide, tubular, abundant, closely arranged and richly fragrant; the colour is yellow or creamy white.

As may be assumed from its native country, this shrub is tender. It is grown in Devonshire and the Isle of Wight, where it flowers in the open ground after a hot summer. But even in the milder parts of Sussex and Hampshire it is better with wall protection, and a sunny wall at that. One sees it at its best in such places as Monte Carlo, Mentone and Algiers. Without abundant sunshine it is shy-flowering.

GARRYA ELLIPTICA

(*Tassel Bush*)

Near London this evergreen, unisexual shrub is quite hardy in the open ground, but in cold northern districts it will need or, at any rate, show its beauty more fully if planted against a wall. It is a native of California and Oregon and was introduced in 1828. Its habit is bushy and it will grow up to 12 feet high, the roundish or oval, opposite leaves being $1\frac{1}{2}$ to 3 inches long and about half as much wide, dark glossy green above, densely woolly beneath. The flowers are borne on slender, pendulous catkins 3 to 6 inches long (twice the length in the warmer south-western counties) and $\frac{1}{2}$ to $\frac{3}{4}$ inch wide. Each flower consists of a cup-like bract enclosing the base of the stamens (in the male plant) and they are closely packed on the catkin, which is of a silky green.

This shrub flowers with us, as it does in California, from November to February or March; during this period it provides little attraction in the way of colour but nothing in the garden is more graceful. Except for those botanically inclined, the male plant only is worth cultivation, the catkins of the female being quite short and stiff.



FREMONTIA CALIFORNICA



TASSEL BUSH. GARRYA ELLIPTICA

GREVILLEA—HEDERA

GREVILLEA

Being an almost exclusively Australian group of trees and shrubs, the grevilleas are mostly tender in this country. The two following species, however, may be grown against a wall, even in the London district. They dislike chalk and are benefited by a proportion of peat, say half, in the soil. But they succeed nevertheless quite well in a sandy loam and are suitable for a low space such as that beneath a window. Both are evergreen.

The flowers are of curious shape and will repay examination; they have no petals, only a calyx of four parts, the recurved apex of each of which is concave and bears the anthers. The style is long, curved and much exposed.

G. rosmarinifolia will grow 6 or 7 feet high in Cornwall, the foliage resembling that of the rosemary, the leaves being 1 to 2 inches long, $\frac{1}{8}$ inch wide, dark dull grey-green above, silvery with hairs beneath. Flowers deep rosy red, densely crowded in clusters opening from February onwards according to climate. The red style protrudes $\frac{1}{4}$ inch. New South Wales.

G. sulphurea is also a shrub about 6 feet high in our mildest localities, but is very distinct from *rosmarinifolia* in its needle-like leaves, $\frac{1}{2}$ to 1 inch long, $\frac{1}{16}$ to $\frac{1}{12}$ inch wide, prickly pointed. The flowers open in May and June in a close cluster at the end of each shoot; they are each $\frac{1}{2}$ inch long, pale yellow. The nearest spot to London where I have seen it succeeding well in the open ground is Haslemere. Near London itself it is only safe with wall protection. New South Wales.

HEDERA

(Ivy)

There is a curious dearth of evergreen climbers genuinely hardy in this country and amongst them the ivy occupies a

WALL SHRUBS AND CLIMBERS

unique position. It is the hardiest of them all, is self-clinging and bears hard and repeated clipping for many decades. It can, moreover, be propagated with the greatest ease by means of cuttings, made 8 inches or so long, and placed in fully open ground during October and the five following months.

H. Helix, the common ivy, so well known in song and folk-lore, is a genuine native of the British Isles, but the genus is represented in continental Europe and Asia Minor as far east as the Caucasus, also in Persia, the Canary Islands, N. Africa, Himalaya, China and Japan. There is no ivy naturally wild in the New World.

The natural home of the ivy is in woodland, hedgerow or thicket, where, if it gets a footing on the trunks or stems, it will climb to the summit of the highest trees, attaching itself by short aerial roots from the stems. Its favourite tree perhaps is the oak, but so far as I have seen it is rarely found on the beech. Where no tree or shrub growth is available, it creeps over the ground. The ivy is in fact the most adaptable of all plants for covering bare earth beneath tree branches where little else will grow.

There is considerable variation in the foliage of the ivy as seen in this country, especially in the milder, softer parts like Devon and Cornwall, Wales and Ireland, and several forms from those parts have been named. What may perhaps be regarded as the typical form has three- or five-lobed leaves, 2 to 3 inches long and wide, dark green, traversed by pale veins and giving off an acrid odour when crushed. When an ivy plant has reached the top of its support and can no longer climb it changes its character completely; it branches and forms short sturdy twigs bearing larger, unlobed leaves and no longer produces aerial roots. This is the reproductive state of the plant in which it flowers and produces seeds. The flowers, which have little beauty, are fol-

HEDERA

lowed by globose clusters of inky black berries each of the size and shape of a pea. It may be mentioned that the shoots of this fertile state of the ivy are easily rooted and they make rounded evergreen bushes several feet in height and in width and never attempt to climb. They are commonly known as "tree-ivies". Such plants are useful for planting in places too shady for most things.

The varieties of ivy are very numerous. For those who like variegated plants there are "Lee's Silver"; *argenteo-variegata*, whose leaves have a silvery margin; *chrysophylla*, with leaves wholly yellow or edged with that colour; *Cavendishii*, with smaller, angularly lobed leaves edged with creamy white. *Minima* has the smallest leaves of any ivy, only $\frac{1}{2}$ to 1 inch wide, suitable therefore for small areas of wall. *Ovata* is a neat small-growing ivy whose dark leaves are unlobed. "Emerald Green" has particularly glossy green leaves. These are all variations of our native ivy; distinct species are as follows:

H. hibernica, Irish ivy, very common in gardens and the most useful for planting as a ground cover beneath trees; the leaves are larger than those of the common ivy and usually 4 or 5 inches wide and the growth is more vigorous. It is too coarse to be suitable for house walls. *H. colchica* is a native of the Caucasus and Persia and has the largest and most leathery of all ivy leaves; they are 4 to 10 inches long. *H. cinerea*, the Himalayan ivy, is very distinct in its greyish tinged leaves which are often nearly twice as long as they are wide. *H. chrysocarpa*, from Italy, is noteworthy for its yellow berries.

With regard to the question of ivy growing on trees and whether or not it does harm to them, it has to be remembered that the ivy is not a parasite in the strict sense of the word. It is not like the mistletoe, for instance, which gains the whole of its sustenance from its host. The ivy uses the tree as a

WALL SHRUBS AND CLIMBERS

support merely to reach the sunlight and its fructifying state. Personally, although I dislike it on healthy trees, I have never been able to detect any ill effects so long as it is confined to the trunks or main limbs of the tree on which it is growing; it is when it reaches the leafy parts and begins to compete with them for light and air that the ivy should no longer be tolerated. In places where ivy is naturally abundant it must often be regarded as a pest, climbing up and hiding as it does the beauty of bare trunks of trees and obliterating their clean lines. Nevertheless an old tree well furnished with ivy makes a charming winter picture if sufficiently isolated.

Ivy is a very popular climber for clothing dwelling houses and, to my mind, there is far too much of it used in that way. It is accused of hastening the disintegration of old castle and abbey walls already more or less in ruin and, no doubt, this is so, as there are openings and crevices into which its roots can penetrate. But with regard to sound brick and stone walls I have never seen damage done by ivy. I have stripped it from walls on which it has sojourned for over sixty years and not found a single mortar line loosened. There is no doubt an ivy-covered house is warmer and drier for its presence. On the other hand it is apt to harbour dust and insects.

HIBISCUS SYRIACUS

(*Syrian Keltmie*)

A deciduous bush up to 10 feet high with ovate, toothed or lobed leaves 3 or 4 inches long. Flowers five-petalled, produced singly from the leaf-axils towards the end of leafy branchlets, each 3 to 4 inches wide; there are double as well as single varieties and the colour is very variable, ranging in the different forms from white to red, purple and violet. In hot summers it commences to bloom in late August but normally is a September flowerer. In dull cold autumns, its

HIBISCUS—HOHERIA

flowers open reluctantly, for which reason (although perfectly hardy) it is better grown against a sunny wall in the north.

Good pure white varieties are *toton albus* (single) and *Admiral Dewey* (double). *Hamabo*, a very attractive variety, has single pale blush flowers with a crimson blotch at the base of each petal; *puniceus* is red; *la Reine* rose-coloured; *coeleste* bluish purple.

HOHERIA

A small genus of evergreen trees all native of New Zealand and attaining there heights of 15 to 30 feet. They are closely akin to *Plagianthus* (or *Gaya*) and by some authorities the two are generically united. Hardy from South Sussex and Hampshire westward, they are only satisfactory northwards with wall shelter. They can be recommended only for lofty walls (to which leading shoots only need be attached) and they will succeed in any reasonably good soil, even a chalky one. They blossom most abundantly—the flowers always pure white—and are welcome also in doing so late, i.e., from July to September. All the species are very variable in the shape, size and toothing of leaf.

H. populnea, the best known species, is a tree up to 30 feet high and of rather slender habit, the branches, however, often pendulous at the ends. Its leaves, 3 to 5 inches long and half as much wide, are pointed, firm-textured, unevenly and coarsely toothed. The flowers are about 1 inch wide and come in the leaf-axils in clusters of four to ten, opening in September. This tree flowers very profusely.

H. angustifolia, sometimes regarded as a variety of *populnea*, is a tree of similar height, but is well distinguished by the narrowness of its leaves, which are 1 to 3 inches long but only $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, spinily toothed. Flowers $\frac{1}{2}$ inch in diameter, on longer stalks than in *populnea*, borne in clusters of

WALL SHRUBS AND CLIMBERS

two to five. It is the least worthy of the three so far as I have been able to judge.

H. sexstylosa is of the same stature as the preceding but is usually more erect or even semi-fastigiate in growth. The bright green leaves are 2 to 4 inches long, $\frac{1}{2}$ to 1 inch wide. Often the conspicuous teeth stand out at right angles to the leaf margin, or are even slightly recurved. Flowers $\frac{3}{4}$ to 1 inch wide; in clusters of two to five. This tree flowers a few weeks earlier than *populnea*.

HOLBOELLIA

Two species of twining climbers belonging to this species are in cultivation. They are evergreen and of vigorous growth, so vigorous that they may be planted to grow over large trees to which, when once they become attached, their twining stems will secure them permanently. On more than one house in the west country a *holboellia* has covered the entire front.

H. latifolia was introduced from the Himalaya nearly one hundred years ago. Its leaves consist of three to seven stalked leaflets radiating from a main stalk 3 to 5 inches long. The leaflets, which vary from 3 to 7 inches long, one-third as much wide, are leathery in texture, strongly veined and dark glossy green. The very fragrant flowers are borne in clusters and are unisexual, but both male and female ones are borne on the same plant. The males are greenish white, the females purplish; each having six petal-like sepals about $\frac{1}{2}$ inch long. Fruits fleshy, 2 to 3 inches long, containing several rows of numerous black seeds. It may need artificial impregnation of the flowers to secure them.

H. coriacea was introduced from Central China in 1907 and is proving hardier than the preceding species, which is at its best only in the warmer counties. This newer species is very vigorous and easily distinguished from the older one by its

HOLBOELLIA—HYDRANGEA

leaves never having more than three leaflets. The purplish female and the greenish white male flowers come in separate clusters during April and May. Fruit purple, about 2 inches long by nearly 1 inch wide, containing numerous jet black seeds.

HYDRANGEA

There are in cultivation three species of *Hydrangea* that are genuine climbers. Their mode of climbing is similar to that of the ivy, i.e. by means of aerial roots produced from the inner side of the young stems which are thereby enabled to cling closely to their support. This support in a state of nature consists almost wholly of the trunks of trees, but in cultivation walls are more often used.

H. petiolaris, a Japanese species (often called *H. scandens* and—quite wrongly—*Schizophragma hydrangeoides*) was introduced in 1878 and is the commonest of these climbing species. It is very hardy and vigorous, may be grown on a lofty north wall and will reach the top of trees 60 to 80 feet high, the older bark peeling. It is deciduous and the usually long-stalked leaves are up to 4 inches long, a little less wide, pointed, and sharply and finely toothed. The flowers open in June in flattish corymbs 6 to 10 inches across; most of them are small and fertile—that is, capable of producing seed; but, scattered round the margin of the cluster, are some much larger white flowers, 1 to 1½ inches across, which have neither stamens nor pistil and are, therefore, quite sterile. The flowers are borne on bushy outgrowths from the front of the clinging branches; the aerial root-bearing young shoots never flower.

H. anomala (syn. *altissima*) is similar and quite closely related to *petiolaris*; it is found wild in the Himalaya and in W. China. The leaves are more coarsely toothed, the flower-clusters are smaller and the stamens of each flower number only ten (fifteen to twenty *petiolaris*). *H. anomala* is not

WALL SHRUBS AND CLIMBERS

quite so hardy and is scarcely so valuable a climber as *H. petiolaris*. The third species,

H. integerrima (often wrongly called *scandens*) is a native of Chile, whence it was introduced about 1927. It is very distinct from the two preceding species in being evergreen and in the leaves being without marginal teeth. Like them, however, it clings to its support by means of aerial roots. The flower-clusters differ in being columnar instead of flat and the sterile flowers (not very abundant) are creamy white and 1 inch or a little more wide. Its value in cultivation is as yet scarcely proved, but it is an addition to evergreen, self-supporting hardy climbers, which are very uncommon in gardens. It has been noted as attaining heights of 50 feet and upwards in Chile.

H. tiliaefolia is apparently another name for *H. petiolaris*.

HYPERICUM LESCHENAULTII

In the size of its flowers and in their richness of colouring this sub-evergreen hypericum is unsurpassed by any of its fellow species. It was first found on the mountain tops of Java in 1805 and subsequently in Sumatra; we cannot therefore expect it to be very hardy. It grows excellently in the open in the milder southern and south-western counties, but in cooler districts needs wall protection. Even in the more favourable localities it is, perhaps, seen at its best against a wall, for its habit is very lax and open. If the leading shoots can be secured to a wall and the lateral ones left to hang loosely, that, probably, is the most effective way of displaying its beauties. In the open ground it grows some 6 or 8 feet high, but against a wall will attain a height of 12 feet. The leaves are up to 2½ inches long, slightly glaucous green above, more glaucous beneath. The flowers come at the end of the shoot singly, in threes, or occasionally in a cluster of seven, each one about 3 inches across. They commence to open in

HYPERICUM—INDIGOFERA

July or August and continue until October. The young shoots are reddish brown and in favourable situations will grow from $1\frac{1}{2}$ to 3 feet in length in a single season. Easily increased by cuttings.

ILLICIUM

Two species of this genus are cultivated out-of-doors, one from Japan, the other from the S. United States. They belong to the magnolia family, are evergreen, and tender enough to need wall protection near London. They flower between late April and early June.

I. anisatum (also known as *I. religiosum*) is the Japanese species and is rather the hardier. It is naturally a shrub or a small tree up to 20 feet high, with evergreen foliage scented like aniseed when crushed. The narrowly oval leaves are 2 to $3\frac{1}{2}$ inches long, rather light green and smooth, whilst the flowers, which come from the leaf-axils singly or in pairs have numerous creamy yellow, strap-shaped petals tinged with green and about $\frac{1}{2}$ inch long.

I. floridanum, introduced from Florida in 1771, has larger leaves up to 3 or 4 inches long and flowers similar in shape to those of *anisatum* and with the same twenty to thirty petals, but they are of a dark maroon purple and $1\frac{1}{2}$ to 2 inches wide. The foliage when crushed has a pleasant aromatic fragrance. It is a shrub up to 6 or 8 feet high.

INDIGOFERA GERARDIANA

A deciduous shrub naturally 6 to 8 feet high in its Himalayan home, this indigofera is not sufficiently hardy near London for its shoots to survive any but unusually mild winters. But although so often cut back to ground level it springs up again freely and flowers on the new shoots from June until well into autumn. Against a wall facing east, west or south its shoots survive and a plant may become 12 to 16 feet high. The main stems can be kept close to the wall and the shoots

WALL SHRUBS AND CLIMBERS

can be pruned close back every winter. Grown in this way a well-known amateur in Hertfordshire considers it one of his best shrubs.

Nearly related to the indigo plant, this shrub belongs to the pea family (Leguminosae) and its foliage is quite dainty, each pinnate leaf being 3 or 4 inches long and made up of from thirteen to twenty-one oval leaflets each about $\frac{1}{2}$ inch long. The flowers are borne on racemes which spring from the leaf-axils and develop successively from below upwards. Each blossom is rosy purple, pea-flower-shaped, $\frac{1}{2}$ inch long and there are twenty to thirty on each raceme.

ITEA ILICIFOLIA

Although hardy enough in mid-Sussex and thence southwards, this evergreen shrub is not hardy near London and in similar climates. But in these places it makes a pleasing and very distinct wall plant. As the specific name implies the leaves are rather holly-like in appearance, being oval, $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long, spiny-toothed at the edges, but not so stout in texture as in holly. The tiny flowers open in August and although they have little colour beauty, being greenish white, they are borne on extremely elegant, slender, drooping or decurved racemes 6 to 10 inches long, but only $\frac{1}{2}$ inch wide. A native of Central and W. China. In those favoured places where it succeeds fully in the open it is very charming; at Borde Hill in Sussex, for instance, it is a rounded bush 12 feet high, crowded in late summer with its racemes.
I. yunnanensis, also from W. China, is a very similar but newer species, which may not prove so valuable.

JASMINUM

(*Jasmine*)

This genus is a large one of well over one hundred species, most of which, however, are found wild in tropical or sub-

JASMINUM

tropical regions; about a dozen only are suitable for cultivating in the open air. All the jasmines are easily cultivated in ordinary loamy or peaty soil and all of them prefer a sunny position. For walls the following are valuable.

J. floridum. A semi-evergreen shrub of loose rambling growth found up to 10 feet high in a wild state. Leaves alternate, consisting of three or sometimes five leaflets, each of which is about 1 inch long and half as much wide. Flowers yellow, borne numerously from July to September in loose terminal clusters; each flower is about $\frac{1}{2}$ inch long with a tubular base and five spreading lobes. A native of China and fairly hardy but best trained loosely against a wall. Closely resembling it is **J. revolutum**, a native of Afghanistan and the Himalaya. This differs in having sometimes as many as seven leaflets and botanically in the calyx having very short teeth. It is hardier and can be grown fully in the open.

J. Beesianum. A deciduous climber from Western China of vigorous growth and chiefly remarkable for its rose-coloured flowers which are fragrant. The young shoots are angular and bear opposite, undivided, narrowly ovate, pointed leaves 1 to $1\frac{1}{2}$ inches long. The flowers come singly or in threes, each $\frac{1}{2}$ to $\frac{1}{2}$ inch long with mostly six lobes that give them a diameter of $\frac{1}{4}$ inch. The berries are the most ornamental part of the plant, being shining black, rather orange-shaped, $\frac{1}{2}$ to $\frac{1}{2}$ inch wide. A better garden climber, perhaps, is

J. stephanense, a hybrid from **Beesianum** crossed with **officinale**. The leaves are intermediate between the undivided ones of the former and the pinnate ones of the latter; sometimes they have as many as five leaflets. The pale pink flowers come in clusters and are therefore more attractive than in **Beesianum**, but the garden merit of both is in the glossy black fruits. Blossoms in June and July.

J. nudiflorum. Winter-flowering Jasmine. A deciduous shrub

WALL SHRUBS AND CLIMBERS

of loose habit growing as much as 10 to 15 feet high on a sunny wall but easily kept at half that height by pruning, if desired. The leaves are opposite, each composed of three leaflets about 1 inch long. The flowers open from November to February, but blossoming may be deferred by an early setting in of severely cold weather; they come singly from the joints of the previous summer's shoots and are bright yellow, $\frac{1}{4}$ inch or more wide, the slenderly tubular base spreading at the mouth into six lobes. For cultivation in towns this is the best of jasmines and one of the best of all wall shrubs. None surpasses it for giving a bright display in mid-winter. Its leading shoots only need be nailed or tied to the wall; the rest of the plant can be left to grow loose. Young shoots may be from 1 to 2 feet long and they are gracefully arching or even pendulous. Such pruning as may be necessary should be done as soon as the flowering time is past and should consist in cutting out old and redundant growths. This jasmine is perfectly hardy and may be grown fully in the open, but it flowers earlier and more freely against a wall. Introduced from China in 1844.

J. officinale. Common Jasmine. This is the best known and best loved of jasmines. It has been cultivated so long in England that the date of its introduction is not known. It is the jasmine of poetry and legend. More vigorous than any other species we grow, its luxuriance is sometimes embarrassing, making shoots as it does 6 feet and upwards long in a single season. The leaves are opposite and each consists of five, seven, or nine leaflets $\frac{1}{2}$ to $2\frac{1}{2}$ inches long and up to 1 inch wide. It blossoms from midsummer to October in clusters usually of three to five flowers terminating short twigs near the end of the shoot, each flower white, deliciously fragrant, scarcely 1 inch long and about the same across the four or five spreading lobes. The almost thread-like lobes of the calyx are about $\frac{1}{8}$ inch long. The charm of the flowers,

JASMINUM—KADSURA

apart from their pure whiteness, is in their delightful perfume—the theme of many a poet. They are used in perfumery.

This jasmine is a native of Persia and the country eastwards as far as Cashmere and China. It is hardy enough in the south of England to be grown fully in the open, clambering over arbours and pergolas, or trained over rough branches or poles. In the colder counties it may need a wall. It is often grown on the walls of houses where the leading stems are supported by ties or nails and the rest left to form a loose tangle. It can be pruned in winter or early spring, pretty severely if necessary, for it flowers on the current year's growths. It is deciduous or nearly so and will, with support, grow 30 to 40 feet high.

J. primulinum. Primrose Jasmine. Although in a botanical sense considered akin to *J. nudiflorum* this is very different in appearance. It is freer growing, evergreen and the flowers individually are twice or nearly twice as wide—sometimes nearly 2 inches. The leaves also are much larger; they have their three leaflets each 1 to 3 inches long. Flowers primrose yellow, nearly always more or less double, borne singly from the joints of the previous summer's growth, and opening during spring and early summer; they are not fragrant. Introduced from China in 1900, this jasmine has never been found genuinely wild or bearing seed. It is the least hardy of the jasmines here mentioned but may be expected to succeed on a south wall in the south and west of England, especially if covered in very severe weather. It will easily survive a series of mild winters but there is always the danger of its being much injured, even on a wall, in severe ones.

KADSURA JAPONICA

An evergreen climbing shrub growing 10 feet or more high, with slender, smooth, twining stems. Leaves 2 to 4 inches

WALL SHRUBS AND CLIMBERS

long and about half as wide, slenderly pointed. Flowers solitary in the leaf-axils, opening on the current season's shoots from June onwards; they are rather cup-shaped, yellowish white, slenderly stalked, $\frac{1}{4}$ inch wide, made up of some six to nine fleshy petals. The berries are globose, $\frac{1}{8}$ to $\frac{1}{4}$ inch wide, scarlet and closely clustered in a globose, pendulous head. This interesting climber should be grown on a wall. It was introduced from Japan in 1860, belongs to the magnolia family, and is closely related to Schizandra which is, however, distinguished by its elongated fruit clusters.

KERRIA JAPONICA VAR. PLENA

(*Double-flowered Kerria*)

The typical, single-flowered kerria is a spreading, twiggy shrub with ordinary five-petalled blossom and neither requires nor is suitable for wall cultivation. But this "double"-flowered variety, although hardy enough, is usually grown against a wall. This is probably because its tall, stiffly erect, rather lanky mode of growth, sometimes as much as 12 feet high, fits it better for a place against a wall than in the open ground. It is indeed remarkably distinct from the type plant, not only in being taller and in being of erect habit, but also for the thickness of its stems, the comparative absence of twiggy growth, the large size of its flowers (often 2 inches across) and the extraordinary multiplication of the petals which in a single blossom may be numbered by the dozen. Flowers rich yellow, opening in April and May; leaves averaging 2 to 3 inches in length, coarsely and doubly-toothed. The branchlets are bright green and rather attractive in winter. This shrub was noticed by travellers in Japan as long ago as 1700 but it was not introduced to England until 1804. It has long been popular planted against cottage walls.



LAGERSTROEMIA INDICA

JASMINUM PRIMULINUM



LAGERSTROEMIA—LAPAGERIA

LAGERSTROEMIA INDICA

(*Crape Myrtle*)

Very popular in warm temperate regions, where it gets to be 20 to 30 feet high, this beautiful deciduous shrub or tree can only be grown in this country on warm walls. Success with it cultivated in this way has been attained in mid-Sussex. It has privet-like leaves 1 to 2½ inches long arranged in pairs. The flowers open from July to September in panicles 6 to 8 inches long and about half as wide, each flower being ¼ to 1 inch wide, varying from pink to deep red and in one form (*alba*) white. The most distinctive feature of the flower are the six petals, curiously crinkled like crape—hence the popular name. As the blossom comes at the end of the leafy shoots of the current season, plants can be pruned hard back annually; this should be done in February. A most charming shrub needing all possible sunshine. Native of China and Korea.

LAPAGERIA ROSEA

(*Chilean Bell-flower*)

Well known in cool greenhouses, this evergreen twiner is too tender to be grown out-of-doors except in such localities as S. Devon and Cornwall, but in those counties it is successfully grown on shady walls. It is an anomalous member of the lily family named in honour of the Empress Josephine, whose family name was de la Pagerie. It grows some 12 to 20 feet high, its slender stems being hard and wire-like. Leaves stiff and leathery, 2 to 3½ inches long, somewhat heart-shaped, pointed, and with three or five prominent veins running lengthwise. The pendulous flower is 3 inches long, of elongated bell shape, made up of six petals of a rich crimson; they come solitary or two or three together. Stamens white; anthers yellow. There is a charming variety (*albiflora*) with pure white flowers. The lapageria prefers a shady

WALL SHRUBS AND CLIMBERS

position, abhors dryness at the root and likes a peaty or light loamy soil. It flowers during late summer and autumn.

LARDIZABALA BITERNATA

An evergreen climber of vigorous, twining habit, growing 40 feet or more high. The leaflets are arranged in sets of three and there may be three, six, or nine of them to one leaf; they are of stiff texture, vary from 2 to 4 inches in length and are mostly of ovate shape, the leaf-stalks covered with brown hairs. The flowers are unisexual and the males, coming in pendulous spikes 3 or 4 inches long are each $\frac{1}{4}$ inch wide, the sepals being chocolate purple, and the small, narrow petals white; the females are solitary on slender stalks. Fruit sausage-shaped, 2 to 3 inches long, sweet and edible.

This climber belongs to the same group as Akebiak Holboellia and Stauntonia and comes from Chile. It should be given a place on a wall and even then is only really satisfactory in the milder counties. It first flowered in Veitch's nursery at Exeter in December, 1849.

LATHYRUS PUBESCENS

A climbing perennial sub-shrubby plant described as growing 10 to 20 feet high, or even more, in a wild state. Young stems herbaceous, four-angled, bearing leaves made up of one (rarely two) pairs of stalkless leaflets, each 1 to 3 inches long, distinctly ribbed beneath, the mainstalk terminated by a downy, three-parted tendril. Flowers produced in June from the leaf-axils in crowded clusters 3 or 4 inches long and nearly as wide at the top of a downy stalk 3 to 6 inches long. Each flower is 1 inch wide, pea-flower-shaped and of some shade of violet-blue or lilac, some paler than others.

Native of Chile, the Argentine and other parts of Temperate S. America where it climbs amongst shrubs, holding on by its tendrils; introduced in 1890. This relative of the



LEPTOSPERMUM SCOPARIUM



LATHYRUS PUBESCENS

LATHYRUS—LAVANDULA

Sweet Pea (*L. odoratus*) is very charming during its flowering period from June onwards. It is hardy during mild or ordinary winters in the south if grown against a wall. In the warmer places it may be allowed to scramble over other shrubs of little worth. During his travels in Chile and the Argentine (1925 7) Mr. Comber found a form with white flowers which was growing 30 feet high and Mr. Clarence Elliott a few years later found one with large heads of primrose yellow flowers near Concepcion, Chile.

The following species, also climbers, are herbaceous perennials useful for planting in borders where they can be provided with a ring of pea-sticks for their support. As in *L. pubescens* the leaf stalk ends in three tendrils:

L. grandiflorus has very handsome flowers, two or three on a stalk; they are $1\frac{1}{2}$ inches wide, the standard petal violet purple, paling towards margins keel petals crimson. They are large enough to compare with sweet peas. This species is 4 to 6 feet high.

L. latifolius. Everlasting Pea. This, a native of Eastern Europe with purple-rose flowers, has escaped from gardens and has become wild in many parts of England. It grows some 6 or 8 feet high, is very hardy and easily grown. There are several varieties, such as *albiflorus* (white), *splendens* (richly coloured), *magnificus* (ditto).

L. rotundifolius. Persian Everlasting Pea. A native of Eastern Europe and Asia Minor, introduced in 1822. Its stems, dwarfer than the preceding, are distinctly winged and quite free from down. Flowers of a bright rose-pink, each 1 inch wide, borne in clusters 3 to 4 inches long.

LAVANDULA DENTATA

(*Toothed-leaf Lavender*)

This is a small shrub interesting to those who like to grow plants needing special care, for it is undoubtedly tender.

WALL SHRUBS AND CLIMBERS

A native of the Mediterranean Region, one of its notable sites as a wild plant is the Rock of Gibralter. It attracted the notice of plant lovers long ago and was already in cultivation in England in the sixteenth century. The flowers and leaves have the characteristic lavender scent but are inferior to the common species in that respect; but as regards blossom and foliage it is the more ornamental.

An evergreen bush from $1\frac{1}{2}$ to 3 feet high, with narrow leaves 1 to $1\frac{1}{2}$ inches long, the margins of which are regularly cut into rounded lobes half-way to the midrib. The densely packed head of flowers 2 inches long is borne at the top of an erect, slender stalk up to 1 foot in height; they are pale lavender blue. But the most ornamental part of the inflorescence is made by the bracts, each about $\frac{1}{2}$ inch long and lavender blue, from the base of which the flowers spring. The prettily cut leaves distinguish this from all other lavenders. Another species,

L. Stoechas, from the same region, is of about the same degree of hardiness. It is distinct from *dentata* in having toothless leaves and in having the ordinary flower-spike crowned with a conspicuous tuft of large purple bracts. The scent is more pine-like than lavender-like.

As regards cultivation these two lavenders should be grown in sandy loam mixed with mortar rubble or chalk and planted close to the base of a sunny wall where in hard weather they can conveniently be protected by a mat or other covering. They are hardy on the south coast except in winters of exceptional severity and flower from June or July onwards.

LEPTOSPERMUM

(Tea-tree)

The leptospermums are evergreen shrubs or small trees with slender twigs belonging to the myrtle family and natives of

LEPTOSPERMUM

Australia, Tasmania and New Zealand. They are very uniform in general appearance usually having small leaves from $\frac{1}{2}$ to $\frac{1}{4}$ inch long, never toothed or divided. The flowers of the different species are also very uniform, being $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, tubular at the base with five rounded petals (nearly always white) narrowed at the base to a claw so that between them the segments of the calyx are visible. They come singly from the tips of the twigs or from the leaf-axils. As in most members of the myrtle family the stamens are very numerous.

Four species are grown on walls, viz., *L. flavescens*, *L. Liversidgei*, *L. pubescens* and *L. scoparium*. Of these *L. Liversidgei* and *pubescens* are the hardiest at Kew; the latter is the more ornamental and is distinguished by its very downy twigs and leaves. *L. Liversidgei* has smaller flowers $\frac{1}{2}$ to $\frac{1}{4}$ inch wide; it is the "lemon-scented tea-tree" of Australia, a lemon-scented oil being obtained from the leaves. *L. scoparium*, the "tea-tree" of New Zealand is notable for its varieties with coloured blossom. Of these var. *Nichollsii* has flowers rich carmine red and var. *Chapmanii* has them larger than in the type and rose coloured. In a climate like that of Kew all these "tea-trees" need wall protection, although they begin to be hardy thirty or forty miles south of London. Even there, however, they blossom more profusely against a wall. The flowering time is from June onwards.

A creeping variety of *L. scoparium* called *prostratum* appears to be hardier than the type. It can be used as a climber on a lowish wall.

The leptospermums have, of course, no affinity with the true tea plant (see *Camellia Thea*). The popular name of "tea-tree", given generally to the members of this genus, is said to have arisen from Captain Cook's sailors making a brew from the leaves of *L. scoparium*.

WALL SHRUBS AND CLIMBERS

LIGUSTRUM CONFUSUM

(*Khasian Privet*)

An evergreen shrub or small tree native of N. India whose young shoots and flowerstalks are covered with down. Leaves $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long about one-third as much wide, lanceolate, smooth, pale bright green. Flowers of the ordinary privet type but of a purer white, $\frac{1}{2}$ inch wide, produced in June and July in panicles from the previous year's growths; stamens white with pink anthers. Fruits black, covered with purple bloom, each about $\frac{1}{2}$ inch long and $\frac{1}{8}$ inch wide.

Hardy in the south and south-western counties, this requires the protection of a wall in colder districts. It is one of the best of the privets in regard to blossom, but it is as a fruit-bearer that it is more attractive. In shape and colour the fruit panicles may be likened to miniature bunches of grapes. Being of robust habit it should have a wall at least 10 feet high and its leading shoots only need be attached to it. It should be pruned by cutting out the more out-growing shoots, not by a general cutting back.

LINDERA PRAECOX

A deciduous shrub belonging to the same family as the bay laurel (*Lauraceae*) and native of Japan and Korea. Near London it is only just hardy and to see it at its best it has to be given a wall where it will grow 10 feet high and flower freely in March. It is in this early blossoming that its chief merit lies. The flowers are quite small, of a pleasant greenish yellow and come in small clusters $\frac{1}{8}$ inch wide close to the twigs. The twigs are dark shining brown marked with white dots and the dark green leaves are 2 to 3 inches long, glaucous beneath. The bark is aromatically scented. It is worth growing where there is plenty of wall space available, especially

LINDERA—LONICERA

by those who like to grow uncommon plants, but for restricted spaces there are better things.

LIPPIA CITRIODORA

(*Lemon-scented Verbena*)

Better known as *Verbena triphylla*, this Chilean deciduous shrub has for 150 years been valued in gardens for the pleasant lemon-like scent of its leaves. Unfortunately it is not really hardy except in the milder counties and is, in consequence, often given a place in conservatories, especially northwards of London. It can, however, be grown in the open air if planted against a sunny wall. The leaves, which come in threes at each joint of the stems, are 3 to 4 inches long, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, tapered at both ends and of a rather pale green; there are glands on both surfaces and the margins are furnished with bristles. The flowers appear during August in slender panicles several inches long; individually they are quite small, tubular and pale purple. Naturally this is a shrub or small tree and in places where it is hardy it can be made to form a small standard with a head of branches borne on a single erect stem.

LONICERA

(*Honeysuckle, Woodbine*)

Some of the most charming of all climbers belong to this genus, especially in the matter of fragrance. It comprises a large number of species, about 180, but the great majority of them are ordinary bushy shrubs, many of no particular merit. Of the true climbers there are a dozen or more worthy of the notice of the average cultivator. The honeysuckles as a whole need a good loamy soil and love abundant moisture. Our lovely native species, so charming a feature of English hedgerows and coppices, will nearly always be found with its roots and the lower portion of its stems in the

WALL SHRUBS AND CLIMBERS

cool shade, its flowering parts in full sunlight. And in my experience this indicated the conditions we should endeavour to supply or imitate, as nearly as we can, in gardens for the whole of them. In the dry hot valley of the Lower Thames the common honeysuckle and others of its type are mostly unsatisfactory if planted fully in the sun, trained up poles or grown against sunny walls. However good the soil may be, they make poor growth and are very apt to be infested with aphides, especially in hot seasons.

For cultivation on walls or dwelling houses, a position facing north-west should if possible be chosen or if planted to grow over a porch arbour or pergola, the shady side may be given to them. Of course these precautions are not necessary in the cool north or where the rainfall is well above the average and the sun not so powerful. It may sometimes happen that a bush or low tree of no particular value may be utilized by planting honeysuckles at the base and allowing them to clamber over it and so, to some degree, imitating nature. They can also be grown on poles in ordinary shrubberies where they get shade at the roots.

Some species such as the evergreen *L. japonica*, *L. Henryi*, and *L. Delavayi* bear the sun quite well.

L. Brownii is a hybrid between *sempervirens* and *hirsuta*, both North American species, the latter yellow-flowered. It is a strong-growing climber, deciduous or semi-evergreen, and flowers from June onwards. The blossom is borne in several whorls on a stalked spike at the end of the shoot, the colour being a brilliant orange-scarlet, the tubular part $1\frac{1}{2}$ inches long, the lips short. An admirable climber, but like its parents not fragrant. The honeysuckles called *punicea*, *fuchsoides* and *plantierensis* are of same origin as *L. Brownii* and so nearly resemble it that they do not need separate mention here. *L. hirsuta* grows wild as far north as Quebec and to it these hybrids owe their hardiness. They all like semi-shade.

LONICERA

L. Caprifolium. Honeysuckle. This is generally thought to be a native of S.E. England, but it is possible it is only naturalized. It is not at any rate anything like so widely spread and common as *L. Periclymenum*, to which it bears so close a resemblance that many do not notice the difference. It is quite similar in habit and capable of growing as high (20 feet), but it differs in having one to three of the terminal pairs of leaves united at their base so as to form a kind of collar round the stem. The leaves immediately below them are quite separate, but stalkless; below these again come shortly stalked leaves. The flowers appear in whorls from the leaf-axils from June onwards, each one $1\frac{1}{2}$ to 2 inches long, distinctly two-lipped, yellowish white tinged with red, charmingly fragrant.

L. etrusca. Etruscan Honeysuckle. Of the common honeysuckle group of species this is one of the finest, but it is not one of the hardiest. It is a native of the Mediterranean region and is of the same type of growth as the common species, but more free and vigorous; in a suitable climate it will make shoots several feet long in a season. The young shoots are purple, the leaves 2 to 3 inches long, the uppermost pairs united by their bases to form a kind of collar. The fragrant flowers commence to open in July, being borne in slender-stalked, axillary clusters at the end of the shoots; these clusters often occur in threes—a terminal one, and a pair from the next joint. Each flower is about $1\frac{1}{2}$ inches long with a slender tube, yellow tinged with red. At Kew it is nothing like so fine out-of-doors as in a cool greenhouse, but it should be admirable in the south-western counties.

L. Henryi. An evergreen climber with very downy young shoots, and a vigorous grower up to 30 feet high. Leaves 2 to 3 inches long, pointed, rounded or rather heart-shaped at the base. Flowers purplish red, produced in terminal clusters, each with a tube about $\frac{1}{2}$ inch long, the two lips

WALL SHRUBS AND CLIMBERS

giving a diameter of $\frac{3}{4}$ inch. The often plentiful crop of blue-black fruits gives this honeysuckle a distinctive character amongst honeysuckles in autumn, but it is not in the first rank as regards blossom.

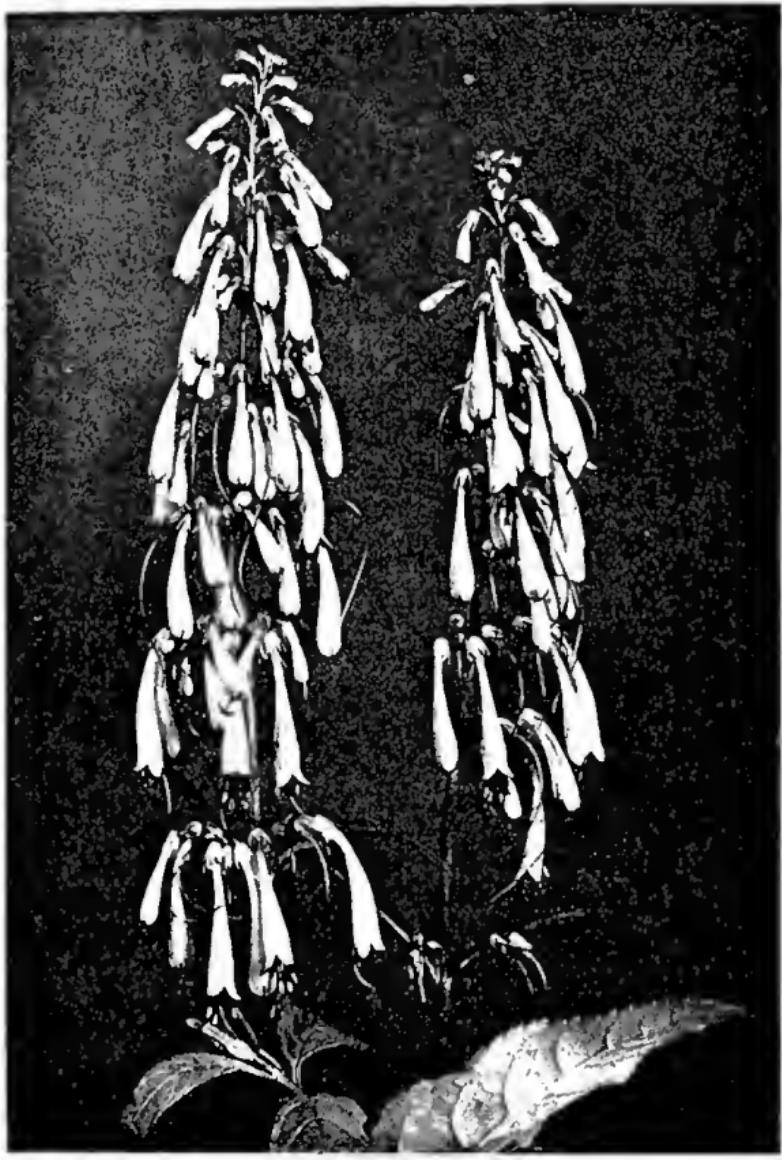
L. Hildebrandiana. Giant Honeysuckle. This remarkable honeysuckle—the largest of all its kind in size, in leaf, in flower and in fruit—is only of interest to those who live in the milder parts of the kingdom like Cornwall, S.W. Scotland, the Isle of Wight, &c. The best success I have seen attained with it is in Col. Stephenson Clarke's garden at Binstead, near Ryde, where, grown on a wall, it flowers and develops fruit freely. In Burma, where it was originally found in 1888, it clammers to the top of trees as much as 80 feet in height; the leaves are 3 to 6 inches long and $1\frac{1}{2}$ to 4 inches wide. The flowers come in pairs, each flower having the tubular part from $3\frac{1}{2}$ to 6 inches long, and 2 to 3 inches across the lips; they are fragrant, at first creamy white, changing to orange as they get older. The egg-shaped fruit is 1 to $1\frac{1}{2}$ inches long. This honeysuckle flowers every year during June, growing near the roof of the Temperate House at Kew. It is evergreen.

L. italicica. Also known by the names "americana" and "grata", this beautiful honeysuckle is a hybrid between *Caprifolium* and *etrusca*. Its provenance is unknown but it is probably of garden origin, although plants, apparently wild, have been found in the south of Europe. It is deciduous and its flowers, each 2 inches long, are yellow tinged more or less with reddish purple. They are produced from June onwards, often in panicles 1 foot long on vigorous shoots, and are very fragrant. Given good soil and generous treatment at the root, a place amongst the best honeysuckles may be claimed for it. A variety called *atrosanguinea* has dark red-purple flowers.

L. japonica. Of the several evergreen species of honeysuckle,



HONEYSUCKLE ARCH AT COMPTON WYNVATES



PHYGELIUS CAPENSIS

LONICERA

this (and its varieties) are the most generally useful. It is a twiner and vigorous in habit, forming a dense tangle of slender downy shoots. The leaves are ovate, pointed, $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long, half as much wide, downy on both sides. The flowers open from June onwards and are borne in pairs from the leaf-axils of the young shoots successively. They are about $1\frac{1}{2}$ inches long, opening white, gradually changing to yellow and very fragrant.

Var. *aureo-reticulata* has leaves whose veins and midrib are golden yellow, and is one of the prettiest of variegated climbers. Var. *flexuosa*, perhaps not quite so hardy as the type, has reddish purple young shoots, leaves not very downy, flowers pale purple outside. Var. *Halleana* is the most downy in twig and leaf of all these varieties.

The best treatment for these honeysuckles is to give them a deciduous bush or even a small tree of little consequence to grow over. When once they have reached the smaller branches, their twining habit enables them to get a firm and permanent hold. I have seen *L. japonica* on Long Island, New York, naturalized on hedges, but it is a native of China, Japan, Korea, &c., and has been known in England since 1806.

L. Periclymenum. Wild Honeysuckle. Woodbine. A climbing shrub widely spread in Britain, usually found clambering over bushes, hedgerows, &c., and capable of attaining a height of 20 feet. The oval or ovate leaves are $1\frac{1}{2}$ to $2\frac{1}{2}$ inches long, green above, slightly blue beneath, those on the lower part of the shoot stalked, those on the upper part stalkless or nearly so. The flowers, which open in July and August, come in whorls from the axils of the terminal leaves; each blossom has a slender tubular base and the two lips give it a diameter of 1 to $1\frac{1}{2}$ inches; the colour is yellowish-white suffused with purplish red.

The woodbine is notable for the delightful fragrance of its blossom, an attribute which has made it always one of

WALL SHRUBS AND CLIMBERS

the chief favourites amongst our native plants. Scarcely a poet has not sung its praises. There are several varieties of it, the two best known being: *belgica* (Early Dutch honeysuckle) more bushy in habit and with the flowers purplish red outside, yellow inside the lips; and *serotina* with similar colouring but later in flowering and known as "Late Dutch honeysuckle". These two varieties are better for gardens than the wild type.

L. sempervirens. Trumpet Honeysuckle. This is the most famous honeysuckle of the United States and the most beautiful and brightest in colour of them all. Unfortunately it has not proved well adapted to our climate and is not very hardy, although it should grow well in the south-west. It is naturally a high-climbing evergreen and its flowers, unscented, and each 2 inches long, are orange yellow and scarlet. *Var. superba* has them entirely scarlet and *var. sulphurea* entirely yellow. Neither the type nor its varieties are easily obtained, but several hybrids which owe parentage to them are commonly offered by nurserymen. (See *L. Brownii* and *L. Tellmanniana*.) In N. America it flowers from June to August.

L. splendida. Spanish Honeysuckle. One of the same group as our native *L. Periclymenum*, but evergreen and a native of Spain. The uppermost pairs of leaves are, as in *L. Caprifolium*, united to form a collar round the stem; the lower pairs are stalkless but separate, ovate or oblong, up to 2 inches long and glaucous, especially beneath. Flowers reddish purple outside, yellowish within and closely clustered on a spike terminating the shoot, neither the flowers nor the spike itself are stalked. Each flower is $1\frac{1}{2}$ to $1\frac{3}{4}$ inches long. This honeysuckle is rare in gardens, but obtainable from a few nurseries. Messrs. W. Smith & Sons of Aberdeen find it perfectly hardy there. It is certainly one of the most beautiful. Distinct in producing its flowers in a terminal spike, not in axillary clusters. Blossoms in July.

LONICERA—LOROPETALUM

L. Tellmanniana. A hybrid raised at Budapest about 1920, its parents being *L. sempervirens*, an American honeysuckle too tender for general cultivation, and *L. tragophylla*, a Chinese species described below. It is of vigorous growth, deciduous, with oval to ovate leaves about 3 inches long, the upper pair united to form a kind of collar round the stem. The flowers appear in June and July in a stalked cluster of eight to twelve, terminating each shoot. They are a charming yellow, about 2 inches long and 1 inch wide across the lips, which are tipped with red. In spite of owing half its parentage to *L. sempervirens* it promises to be hardy. It will at any rate be suitable for wall cultivation, and is best suited in a semi-shaded position.

L. tragophylla. A deciduous climbing honeysuckle introduced from Central China in 1900. It is a vigorous grower 20 feet or more high, with leaves 3 or 4 inches long and half as much wide, the uppermost pair clasping the stem below the terminal cluster of flowers. Each cluster bears from ten to twenty blossoms, the tubular part slender and 3 inches long, the spreading lips 1 inch across. The colour is bright yellow, perhaps the best yellow seen in honeysuckles, but the flowers, so admirable for that and their size, have no fragrance. The best plant of this species I have met with was planted on the north side of a wall and allowed to hang over the top on to the southern side. E. H. Wilson, who introduced it, tells us that it needs abundant moisture and a semi-shaded position. It blooms in June and July.

LOROPETALUM CHINENSE

This is a near relative of the witch-hazels (*Hamamelis*) and its flowers, with the same thin petals $\frac{1}{4}$ inch long but only $\frac{1}{8}$ inch wide, are very similar in shape and arrangement. They are, however, white, and the foliage is evergreen. It is a shrub of bushy, twiggy habit up to 5 or 6 feet high with

WALL SHRUBS AND CLIMBERS

ovate or oval leaves 1 to $2\frac{1}{2}$ inches long, rather more than half as much wide. It usually flowers in February under greenhouse treatment, but wild specimens from China range in time of blossoming from September to April. It has not proved hardy in the London area, but is interesting and pretty enough to deserve a place in warmer districts on a low wall or a vacancy at the base of a higher one. Introduced from China in 1881.

LYCIUM CHINENSE

(*Box Thorn*)

This, the commonest species of *Lycium*, is very frequently seen sprawling over the cliff gardens of the south coast watering places, not infrequently too, on cottages on the way thence from London. It is not a climber in the strict sense of the word, for it does not attach itself to supports by means of tendrils or by twining round them. Whilst it may be thought scarcely good enough for an important position, it is useful for planting against outhouses or unsightly buildings. A few main branches should be attached to the wall and the plant then left to form a loose hanging mass which can be pruned as much as desired in February. Native of China, but owing to the dispersal of seeds by birds is now naturalized and often found in unexpected places.

It is a deciduous shrub of vigorous sprawling habit, up to 12 feet high, with narrow leaves 2 to 4 inches long. The flowers come from the leaf-axils from May to July, usually in twos or threes and are purple with a tube $\frac{1}{2}$ inch long and rather more across the lobes. They are pretty, but the chief beauty of the shrub is in the fruits which are oblong or egg-shaped, up to 1 inch long and scarlet or orange-red. Well laden with these berries, as it should be in September, this *lycium* is very attractive. The most beautiful example I have ever seen grew on a wall at Kingscote Station on the Southern

LYCIUM—MAGNOLIA

Railway near East Grinstead, where it was evidently an object of pride and care to the officials. But that was many years ago.

MAGNOLIA

Although in some places deciduous magnolias of the *conspicua* or *Soulangiana* types are occasionally seen growing against walls, such protection is rarely necessary. In all but the most inclement parts of our islands these are quite hardy; at the same time, wall cultivation may induce a greater freedom of blossoming in such place. Two evergreen species, however, *M. grandiflora* and *M. Delavayi*, are well fitted for wall cultivation, but both need a fairly high wall—one, say, 20 to 30 feet high—to accommodate them adequately.

M. grandiflora, introduced from the S.E. United States 200 years ago, is well known as growing against walls of dwelling houses in this country. Its large, shining, dark green leaves are 6 to 9 inches long and half as wide, and its richly fragrant flowers are 8 to 10 inches across, the thick, concave, creamy white petals numbering six to ten. With us the blossoms usually open from August onwards, but earlier in warmer countries. Complaints are frequently made that it does not flower. This is frequently due to immaturity, more often perhaps to a wrong system of pruning. I think also some plants may be constitutionally less free-blooming than others. As regards pruning, the shoots must not be pruned back indiscriminately. Flowers are only borne on mature shoots and will not be produced by the current-year young shoots springing from pruned older ones. It is necessary therefore to cut out redundant shoots completely and tie in too outstanding ones. This can be done in late autumn after the flowering.

M. Delavayi, a Chinese species introduced in 1899, is in Cornwall an evergreen tree 30 to 40 feet high, of wide spread-

WALL SHRUBS AND CLIMBERS

ing habit, with leaves often 1 foot long and half to two-thirds as much wide, of a dull green above, glaucous beneath. The huge flowers, 7 or 8 inches wide, are dull creamy white, not very beautiful, odorous. This is one of the finest in foliage of all evergreen trees that can be grown in the open air in the British Isles, but it is not hardy except in the south-west. It is, however, cultivated against high walls for the sake of its fine foliage. But it should be given a place where the shoots may stand out away from the wall as much as 2 or 3 feet, cutting out redundant shoots as required.

M. nitida is a third species at present quite rare but worthy of brief mention here. It is a native of S.W. China and the adjacent part of Tibet, and is an evergreen described as 20 to 30 feet high. Its foliage is remarkable for its smooth dark brilliance, each leaf being 2½ to 4½ inches long and nearly half as wide. The late George Forrest, who discovered it, described the flowers as creamy white, 2 to 3 inches wide, and fragrant; he found the tree blossoming in June. At Caerhays, in Cornwall, after a severe frost for that locality in March, 1931, Mr. J. C. Williams wrote to me that, of all the foliage in the garden there, that of this magnolia was the most brilliant. It is not hardy at Kew but is succeeding well with Lord Aberconway on a wall at Bodnant in N. Wales.

MANDEVILLA SUAVEOLENS

A deciduous climber growing 12 feet or more high, whose young shoots—slender, hollow and smooth—exude a milky sap when cut. The leaves, arranged in pairs, are heart-shaped at the base, tapering to a long fine point at the apex, 2 to 3½ inches long, about half as much wide, dark dull green above, with small tufts of pale down in the vein-axils beneath. The sweetly scented flowers come six to eight together on racemes during June and onwards. The corolla is funnel-shaped, five-lobed, creamy white, 2 inches long, 1½ inches

MAGNOLIA GRANDIFLORA AND VARIOUS CLIMBERS





MUTISIA RETUSA

See page 122

MANDEVILLA—MELIA

wide. The remarkable seed pods come in pairs and are each 12 to 16 inches long, but only the thickness of a stout pencil.

Introduced from the Argentine in 1837, this twiner has usually been grown in cool greenhouses, but it succeeds splendidly in the south-western counties and I have seen it good in Sussex and Gloucestershire on warm sunny walls. It has been called "Chilean Jasmine" on account of its fragrance, but it has no botanical affinity with the jasmines.

MARSDENIA ERECTA

A deciduous twining climber which will grow 20 feet high, whose stems and leaves exude a poisonous milky juice when cut. The leaves, arranged in pairs, are of a greyish green, 1½ to 3 inches long, heart-shaped. Flowers white, fragrant, ½ inch wide, borne rather numerously in terminal and axillary clusters 1½ to 2½ inches wide during June and July. Petals narrow and pointed. Native of S.E. Europe and Asia Minor and cultivated in England over 300 years ago, but it is of interest only to those who specialize in out-of-the-way plants. It is safest against a wall, for I have known it to be killed in hard winters fully in the open.

MELIA AZEDARACH

(Bead-tree)

Well known in warm and sub-tropical countries, sometimes as a beautiful deciduous street tree growing up to 30 or 40 feet high, the bead-tree must have wall protection in this country. It has been grown in this way at Oaklands, near Bristol, for many years and flowered there; that district has, of course, a milder climate than our average one. The leaves are made up of numerous leaflets arranged bipinnately, each 1½ to 2 inches long, making the entire leaf 1 to 2 feet long and half as much wide. The fragrant flowers open in June, coming from the leaf-axils in panicles 4 to 8 inches long.

WALL SHRUBS AND CLIMBERS

Each flower is $\frac{1}{4}$ inch wide, the five pink petals being $\frac{1}{8}$ inch in width, lilac-coloured, reflexed. The roundish egg-shaped fruit is yellow, $\frac{1}{2}$ inch wide, and contains a hard, bony seed. A conspicuous feature of the flower is the cluster of ten or twelve violet-coloured stamens standing erect and joined together to make a slender tube $\frac{1}{2}$ inch high. The popular name of "bead-tree" originated from the bony seeds being perforated and strung together to form rosaries.

MENISPERMUM

(Moonseed)

Two species of Menispermum are known and both are in cultivation. They are twining deciduous plants of semi-woody character with suckering roots and ultimately develop a tangle of twisted stems 12 to 15 feet high. Leaves roundish to heart-shaped, often shallowly lobed, 4 to 6 inches wide, with the long slender stalk attached some way distant from the base of the blade. Flowers inconspicuous, greenish yellow, produced in clusters. *M. canadense* comes from N. American, *M. dauricum* from N. Asia; both are very hardy, the American one the more ornamental for its long loose racemes of blue-black fruits, each about the size of a black currant. But neither of these climbers can be regarded as really first-class. The popular name comes from the crescent-shaped seeds. Related to *Cocculus*.

METAPLEXIS JAPONICA

Better known perhaps as *M. Stauntonii*, this belongs to the same natural family as *Marsdenia erecta* previously described, and is of about the same garden value, that is to say, it has to be regarded as of more interest than beauty. It is a deciduous twining plant growing some 10 feet high, with opposite, heart-shaped leaves 2 to $4\frac{1}{2}$ inches long, dull green. Flowers $\frac{1}{2}$ inch wide, downy, dull rosy white, crowded at the end of a

METAPLEXIS JAPONICA—MICHELIA

slender stalk 3 to 5 inches long, opening from July to September. Fruits spindle-shaped, 4 inches long, filled with seeds, each of which is furnished at one end with a tuft of silky hairs $1\frac{1}{2}$ inches long.

Native of Japan, Korea and N. China. Its stems are rather herbaceous than woody, especially towards the top and they are mostly cut back in winter.

MICHELIA

To those who have a special love of plants with perfumed flowers the two species of *Michelia* here mentioned are worthy of notice. They are evergreen and closely related to the magnolias, but differ in bearing their flowers in the leaf-axils instead of at the end of the branchlets.

M. compressa from Japan—it grows on Mt. Fujiyama—is naturally a small tree with oblong or obovate leaves 2 to $3\frac{1}{2}$ inches long, $\frac{3}{4}$ to $1\frac{1}{2}$ inches wide, tapered at both ends and of rather leathery texture. Flowers about $1\frac{1}{2}$ inches wide, yellowish white, very fragrant, the sepals and petals narrow. It lived fully in the open at Kew for a good many years but grew very slowly; it really needs wall protection there.

M. fuscata (syn. *M. figo*) is a better known shrub with foliage very similar to that of *compressa* but distinct in having the young shoots and flowerstalks thickly covered with brown down; the flowers are also distinct in the sepals and petals being yellowish green strongly suffused with dull purple. It was grown at Kew in 1789, but being more tender than *compressa*, has always been given greenhouse shelter there. It is, however, hardy in Devon and Cornwall although mostly grown against walls and is also a success on an east wall at Borde Hill in Sussex. It flowers on the current season's shoots from June onwards, but the blossom is more conspicuous for its scent than for its colour or beauty; two or three flowers will fill a greenhouse with their fruity perfume.

WALL SHRUBS AND CLIMBERS

MITRARIA COCCINEA

One of the most beautiful plants of its type that have come from Chile, this prostrate or climbing shrub is not hardy enough to bear the winters of our average climate. But in the south-western counties it is hardy, and as far north as S. Surrey it has been grown and flowered against a shady wall. Its slender stems are clothed with short down, and its leaves, $\frac{1}{2}$ to $\frac{3}{4}$ inch long and half as wide, are dark shining green and very shortly stalked. The long, slender-stalked flowers come singly from the leaf-axils and are rich scarlet, tubular, 1 inch or rather more long, $\frac{1}{2}$ to $\frac{1}{4}$ wide. At home in Chile it grows in woodland sometimes on the ground, sometimes on tree trunks, but loving damp and shade. It belongs to the Gesnera family and is said to dislike lime in the soil. Blossoms from June onwards.

MUEHLENBECKIA COMPLEXA

A curious climbing deciduous shrub, native of New Zealand, with very slender stems that form a dense tangle but are capable of attaining heights of 20 feet or more. Leaves very variable in shape from roundish to fiddle-shaped, of thin texture, dull green and from $\frac{1}{2}$ to $\frac{3}{4}$ inch long. Flowers of no beauty, greenish white, $\frac{1}{2}$ to $\frac{1}{4}$ inch long, in small axillary spikes. Seeds black, shaped like a tiny beech nut. A good way to grow this plant is over a derelict shrub or small tree which it will cover with an amazing tangle of stems. It may be killed back considerably in very severe winters.

MUTISIA

The cultivated species of Mutisia are evergreen climbers supporting themselves by means of a prolongation of the mid-rib of the leaf into a tendril from one to a few inches long. They belong to the Daisy family (Compositae) and have

MUTISIA

flower-heads of the same composite structure as the common daisy, that is to say, each head has a crowded mass of tiny flowers in the centre, known as the "disk", surrounded by a ring of differently, usually gaudily, coloured "ray" florets.

As found in nature the mutisias usually scramble over other bushes, much in the same way as honeysuckles do at home and that is probably as good a method of cultivation as any. But *M. decurrens* and *M. Clematis* have both been successfully grown on walls, in the west or south-west for preference. For soil, a light, well-drained loam with which is mixed broken brick or pieces of sandstone has been found suitable. The two species just mentioned are not averse from lime. But on the whole, with the exception of *M. Clematis*, the mutisias are not generally amenable to cultivation. They certainly succeed best in the milder, moister parts of this country.

M. Clematis, a native of the Andes of S. America, whence it was introduced in 1859, is only hardy in Cornwall and similar climates. The leaves are pinnate and made up of six, eight, of ten leaflets, each $\frac{1}{2}$ to $1\frac{1}{2}$ inches long. The flowerheads, solitary at the end of the shoots, are 2 to $2\frac{1}{2}$ inches across, brilliant orange scarlet. Very vigorous and easily grown; 30 feet or more high. Flowers from May to September. There is a very fine plant growing on Ludgvan Rectory, near Penzance.

M. decurrens, introduced from Chile in 1859, grows some 12 feet or more high, its narrow, oblong, stalkless leaves 3 to 5 inches long, $\frac{1}{2}$ to 1 inch wide, not toothed. Flower-heads 4 or 5 inches wide, on very short stalks, the ray-florets brilliant orange or vermillion, the central cluster (disk florets) yellow. Perhaps the most striking in size and colour of blossom, but difficult to grow in many places. Summer flowering. It has been a remarkable success at Killerton in Devon where a

WALL SHRUBS AND CLIMBERS

plant has borne over three hundred flower-heads in a season. **M. ilicifolia** is the oldest of mutisias in gardens, having been brought from Chile in 1832, but owing to ill success with its cultivation, long very rare. An importation of seed in 1926 has given it a new footing. It grows some 15 feet or more high, the leaves 1 to 2½ inches long, holly-like with spiny teeth. Flower-heads 2 to 3 inches wide, the ray florets pink to pale mauve, the disk yellow, 1 inch wide. It is one of the hardiest species, a plant having survived in the Edinburgh Botanic Garden for over twenty years. Near this is **M. retusa** which has similarly toothed leaves, but the flower-heads are longer stalked (up to 3 inches) whilst those of *ilicifolia* are often almost stalkless. Ray florets pink. Chilean.

MYRTUS

(*Myrtle*)

M. communis, the common myrtle, is not hardy enough to grow fully in the open near London, but it makes a neat and pleasing evergreen covering for a wall and flowers, moreover, very freely in July and August. The well-known leaves are ovate, pointed, 1 to 2 inches long, of a brilliant dark green, fragrant when crushed, and mostly arranged in pairs. Flowers $\frac{1}{4}$ inch wide, usually solitary on a slender stalk about 1 inch long, springing from the leaf-axils. The five white, rounded petals surround a conspicuous, brush-like cluster of numerous stamens. The fruit is a purplish black, roundish-oblong berry $\frac{1}{2}$ inch long; var. *leucocarpa* has white fruits. A native of W. Asia and possibly the Mediterranean region, whence it was introduced to England very long ago.

Var. *tarentina* has small leaves only $\frac{1}{2}$ to $\frac{3}{4}$ inch long and whitish fruits. It is a more dainty shrub than the type and equally beautiful in flower.

These shrubs should be pruned after flowering by cutting out, or shortening back shoots that are getting too far out

MYRTUS—OLEA

from the wall, also removing any that are too crowded. This is better than a general clipping back if flowers are desired.

From Chile come two other myrtles, viz., *M. Luma* (syn. *Eugenia apiculata*) and *M. Ugni* (syn. *Eugenia Ugni*). The former is naturally a small tree 25 feet or more high and is quite hardy in Cornwall, where it is valued for the handsome, cinnamon coloured trunks. Near London it must have wall protection. The leaves are $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, oval, pointed, dull green. Flowers white, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, with four petals, very copiously borne in summer. Fruit globose, $\frac{1}{2}$ inch wide, sweet, insipid. *M. Ugni* has leaves resembling those of the myrtle but of stiffer texture. The white flowers have usually five petals and are followed by blue-black, juicy, palatable fruits. Scarcely as hardy as the common myrtle.

OLEA EUROPaea

(*Olive*)

The olive is of course well known to those who have visited the south of Europe, for in many places its rounded shape and grey-green foliage constitute at all seasons the dominant feature of the landscape. In most localities in Britain it can only be grown as a wall plant fully exposed to the sun. Not many probably, in spite of its interest, will consider it worth that position, for it has no ornamental qualities beyond its evergreen foliage. The white flowers are only $\frac{1}{2}$ inch wide, the leaves $1\frac{1}{2}$ to 3 inches long and under 1 inch wide. Naturally, it is a tree up to 40 feet high of rugged aspect in old age. It is hardy in the south-west and occasionally bears fruit there. A rather remarkable success has been attained with it in the Physic Garden at Chelsea. A tree there some 12 feet high is in fine health and has occasionally borne a few fruits. It is growing in an enclosed space backed by high brick walls, the reflected heat from which, no doubt, satisfies its sun- and heat-loving desires.

WALL SHRUBS AND CLIMBERS

OLEARIA

The olearias or "daisy-bushes" are all natives of Australasia and they belong to the family of composites. It may be mentioned that the flower arrangement is the same as in the daisy. Each so-called flower is really a crowded mass of tiny flowers, the white outer ones being known as the *ray-florets*, the central closely packed ones as *disk-florets*. This arrangement is common to all the more ornamental members of the family.

O. erubescens is found wild in New Zealand, Tasmania and New South Wales and was introduced nearly a century ago. It is an evergreen shrub growing some 5 or 6 feet high, making long slender shoots densely set with stiff, leathery, coarsely toothed leaves, each $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, dark glossy green above, shining brown beneath. The flower-heads come several together in a short raceme and open in May or June; each flower-head is 1 inch wide with pure white ray-florets and yellow inner ones forming the disk. At this time the shoots made the previous summer become charming cylindrical wands of crowded blossom 1 to $1\frac{1}{2}$ feet long. This olearia is suitable for a low wall.

O. Solandri from New Zealand is another evergreen, slender-twiggued shrub very distinct from the preceding. Its young shoots are angled and covered with yellowish down. Leaves very small, about $\frac{1}{2}$ inch long and $\frac{1}{20}$ inch wide, very dark green above, yellowish beneath and very closely set on the shoots. The flower heads are yellowish, $\frac{1}{2}$ to $\frac{1}{3}$ inch long, each one consisting of eight to twenty florets. This shrub grows some 15 feet high in a wild state. It is not good enough for an important place, but may be tried on a sheltered north wall for the sake of its graceful growth and pleasant greenery.
O. virgata is sometimes grown on walls for its curious and rather elegant growth. Its stems are very slender and wiry

OLEARIS—OSTEOMELES

and its leaves only $\frac{1}{2}$ to $\frac{3}{4}$ inch long by $\frac{1}{8}$ to $\frac{1}{4}$ inch wide; they are oppositely arranged, mostly in clusters, and are silvery white with down beneath. Flowers small, clustered, yellowish white and of no beauty. It closely resembles *O. odorata*, a somewhat hardier shrub, but is distinguished by its square young shoots, those of *odorata* being terete. Both are natives of New Zealand.

OSMANTHUS DELAVAYI

This charming evergreen shrub, introduced from W. China in 1890, is of spreading bushy habit and grows up to 8 feet or more high. Its slender, stiffish shoots will attain a length of one foot during the summer, to be wreathed the following April from nearly end to end with white flowers. These flowers come in clusters of four to eight from the leaf-axils and are fragrant, the slender tubular part of the corolla $\frac{1}{2}$ inch long, dividing at the mouth into four spreading lobes which give it a diameter of $\frac{1}{2}$ inch. The opposite leaves, each $\frac{1}{2}$ to 1 inch long, are very dark, glossy and toothed.

Whilst perfectly at home in the gardens of the south of Surrey and thence southwards and westwards, this *Osmanthus* grows more reluctantly the farther north it is situated, until in many places in the colder midlands it will need wall protection to bring out its best qualities.

OSTEOMELES SCHWERINAE

A native of W. China, whence it was introduced to France in 1888 and shortly after to England. Normally an evergreen, it may in cold winters lose most of its foliage. It is a shrub naturally some 8 to 10 feet high, making each year long, slender, downy shoots bearing dainty pinnate leaves 2 to 4 inches long that are each made up of fifteen to thirty-one, ovate, pointed leaflets, each $\frac{1}{2}$ to $\frac{3}{4}$ inch long, and about one-third as wide. Flowers white, $\frac{3}{8}$ inch wide, produced in June

WALL SHRUBS AND CLIMBERS

in clusters 2 to 3 inches across. Fruit egg-shaped, $\frac{1}{4}$ inch long, blue-black.

The elegant shrub is not hardy in the open ground at Kew but makes a charming wall plant, facing any way but north, if not shaded. Such pruning as may be necessary should be done after the flowering season; it will consist only of taking out crowded shoots and cutting back too outstanding ones. **Var. microphylla** is a dwarfer form with smaller leaves, and smaller flower clusters. Very dainty.

O. subrotunda is a dwarf evergreen differing from Scherwinae by its smaller leaves and stiffer more crooked branches. The nine to seventeen leaflets are of rounder shape and only $\frac{1}{2}$ to $\frac{1}{4}$ inch long. Flowers white, $\frac{1}{2}$ inch wide. Native of China.

PASSIFLORA COERULEA

(*Passion-flower*)

This, the best known of the passion-flowers and a native of South Brazil, has been cultivated in England since 1699, but usually as a cool greenhouse climber. It can, however, be grown on walls thirty or forty miles south of London. Even at Kew it has lived on a wall through a few mild winters.

It is a vigorous evergreen capable of growing 30 to 40 feet high and clings to its support by means of tendrils. Leaves five- or seven-lobed in palmate fashion and 4 to 7 inches wide. The remarkable flower is 3 to 4 inches wide, the five sepals and five petals white. Between them and the stamens comes a conspicuous ring of slender, purplish growths about 2 inches wide known as the "corona", which constitutes the chief feature of the blossom. The flowering season is from June to September, the blooms developing successively from the leaf-axils as the shoots grow in length. It grows luxuriantly on a house near Pirbright, Surrey. Var. "Constance Elliott" has ivory-white flowers.



OSMANTHUS DELAVAYI
(In bush form)



PASSION FLOWER. *PASSIFLORA COERULEA*

PENTSTEMON—PERIPLOCA

PENTSTEMON CORDIFOLIUS

This evergreen Californian shrub has been cultivated in Britain since 1848, but its charms have never been recognized as they deserve. It is of rather loose but very leafy habit and when trained against a wall will get to be 3 to 4 feet high. The heart-shaped, toothed, pointed leaves are 1 to 2 inches long and dark glossy green. The beautiful scarlet flowers have the typical tubular, two-lipped shape of the pentstemons and are 1 to 1½ inches long. They continue to open from June to August or September, being produced in large terminal panicles sometimes as much as 12 inches long. For a low space on a wall, such as is often available beneath a window, few such beautiful plants are obtainable. Flowering on the shoots of the current season, it can be pruned before growth commences. Except in mild districts it is not hardy unless planted against a wall, and this should be a sunny one.

PERIPLOCA GRAECA

(*Silk Vine*)

A deciduous twining plant capable of growing 30 feet or more high, its stems and leaves exuding a milky sap when cut. The opposite leaves are of oval or ovate shape, 2 to 4 inches long, half as much wide, pointed. The flowers, each 1 inch wide, open during July and August in loose clusters of eight to twelve; they are greenish yellow at the margin and outside, brownish purple inside. The narrowish spreading petals, downy at the margins, give the flower a starry shape. The seed vessels are rather remarkable; they come in pairs and are usually united at the end, being of slender cylindrical shape, 5 inches long, only ¼ inch wide and packed with seeds, each of which has a terminal tuft of silky hairs 1½ inches long.

This climber is quite hardy and grows well in any soil of

WALL SHRUBS AND CLIMBERS

fair quality. It is better suited for a pergola or tall pole than a wall. Perhaps of more interest than beauty, its flowers are not without attraction. Native of S.E. Europe, cultivated for more than 300 years in England.

PHILADELPHUS

Nearly all the species of *Philadelphus* (often called "syringa") are very hardy and easily grown. The two following, both from Mexico, are on the tender side and are better planted against a south wall and, growing only about 6 feet high, they are suitable for a low one. It may be mentioned that they are amongst the very few species in the genus whose leaf-buds are exposed; in most of them these buds are hidden by the base of the leaf-stalk.

P. mexicana has the usual type of *philadelphus* leaf, being ovate-lanceolate, three-veined, toothed, more or less hairy on both surfaces, up to $2\frac{1}{2}$ inches long and 1 inch wide. Flowers solitary, $1\frac{1}{2}$ to 2 inches wide, creamy white, very fragrant, opening in June.

P. Coulteri ("Rose Syringa") is very closely akin to *P. mexicana* but differs from it (and all other cultivated species) in having a reddish purple blotch at the base of each petal. From this species have been derived by hybridization the popular varieties with the same purple marking on the petals, such as *purpureo-maculatus*. Being hardy, however, they do not concern us here.

PHILOMIS FRUTICOSA

(*Jerusalem Sage*)

An evergreen shrub some 3 to 4 feet high with four-sided, thick, hairy stems, scarcely woody the first year. Leaves opposite, 3 or 4 inches long, scarcely half as much wide, hairy on both surfaces, especially beneath, the upper surface net-veined and wrinkled as in common sage. Flowers bright

AVENUE OF CLIMBING ROSES





PILEOSTEGIA VIBURNOIDES

PHLOMIS—PILEOSTEGIA

yellow, stalkless, closely packed in (usually) one terminal cluster and two axillary ones, the corolla $1\frac{1}{2}$ inches long, two-lipped in the typical fashion of the labiate or dead nettle family. It is a native of S. Europe and scarcely hardy enough for our colder localities without wall protection. It was in cultivation in the sixteenth century. Prefers a light soil and full sunshine. Quite handsome from July onwards when in flower.

PHYGELIUS CAPENSIS

An evergreen shrub up to 7 feet high in the mildest part of the British Isles but needing wall protection in cooler places. Even there its soft, semi-herbaceous shoots are cut back in winter, but as it flowers on the current year's shoots this may be regarded as only equivalent to ordinary pruning. The opposite leaves are 2 to 4 inches long, nearly half as much wide, bluntly toothed and with a heart-shaped base. The flowers come early in autumn rather thinly disposed in large panicles 1 foot high and half as wide. The slenderly tubular corolla is scarlet, with yellow in the throat, 1 to $1\frac{1}{2}$ inches long, five-lobed at the mouth. A very handsome plant when in flower, introduced from S. Africa about 1850. Related to the pentstemons.

PILEOSTEGIA VIBURNOIDES

An evergreen climber growing up to 20 feet in height, clinging to its support by aerial roots in the same way as the ivy, or like *Hydrangea petiolaris*, to which it is closely akin. Leaves of rather leathery texture, opposite, oblong, 3 to 5 inches long, scarcely half as wide, dark dullish green. Flowers white, produced in late summer and autumn, crowded in terminal panicles 3 to 5 inches wide and long; the stamens constitute the main feature of the flower and give it a diameter of $\frac{3}{8}$ inch.

WALL SHRUBS AND CLIMBERS

Introduced from China in 1908, it is also a native of Formosa and the Khasia Hills, India. It is a useful addition to the evergreen, self-clinging climbers in cultivation which are very few in number. Its aerial roots render it most suitable for a wall.

PIPTANTHUS NEPALENSIS

A shrub or low tree, naturally evergreen, but deciduous in cold localities. The leaves are made up of three stalkless leaflets 3 to 6 inches long and 1 to 2 inches wide, glaucous beneath. The yellow, pea-shaped flowers come closely packed in stiff erect clusters, 2 to 3 inches long and wide; they open in May.

Native of the Himalaya; introduced in 1821. Hardy in most places south of London, this shrub will not live permanently fully in the open at Kew. It is a relative of laburnum and has been called "evergreen laburnum" but its erect flower-clusters are very different and are far from being as beautiful. In places where wall space is scarce it may give place to better things.

PISTACIA

The European pistacias have no beauty of flower nor have they any special attraction in regard to foliage. The only reason for their cultivation is their economic and historical interest, chief amongst them in this respect being *P. Terebinthus*, the "Chian turpentine tree" which yields a valuable resinous juice used in medicine, &c.; also *P. vera*, which produces the pistachio nut. Being hardy, *P. Terebinthus* does not concern us here, but *P. Lentiscus*, the "Mastic tree" needs wall treatment. Naturally, it is a small deciduous tree 15 to 20 feet high, with pinnate leaves each carrying four to ten narrowly oblong leaflets $\frac{2}{3}$ to $1\frac{1}{2}$ inches long. The fruits are about the size of small peas and are at first red then black.

PISTACIA—POLYGONUM

This tree is chiefly native of the islands of the Grecian Archipelago. By incision of the bark it yields a resinous, fragrant substance known as "mastic" and used as a dentrifrice.

PITTOSPORUM TOBIRA

An evergreen shrub or small tree of sturdy habit with dark glossy green, obovate leaves 2 to 4 inches long, half as much wide, tapered at the base, rounded or blunt at the apex. Flowers creamy white, about 1 inch wide, produced from April onwards in clusters 2 or 3 inches in diameter. They are charmingly fragrant with a scent resembling that of orange blossom.

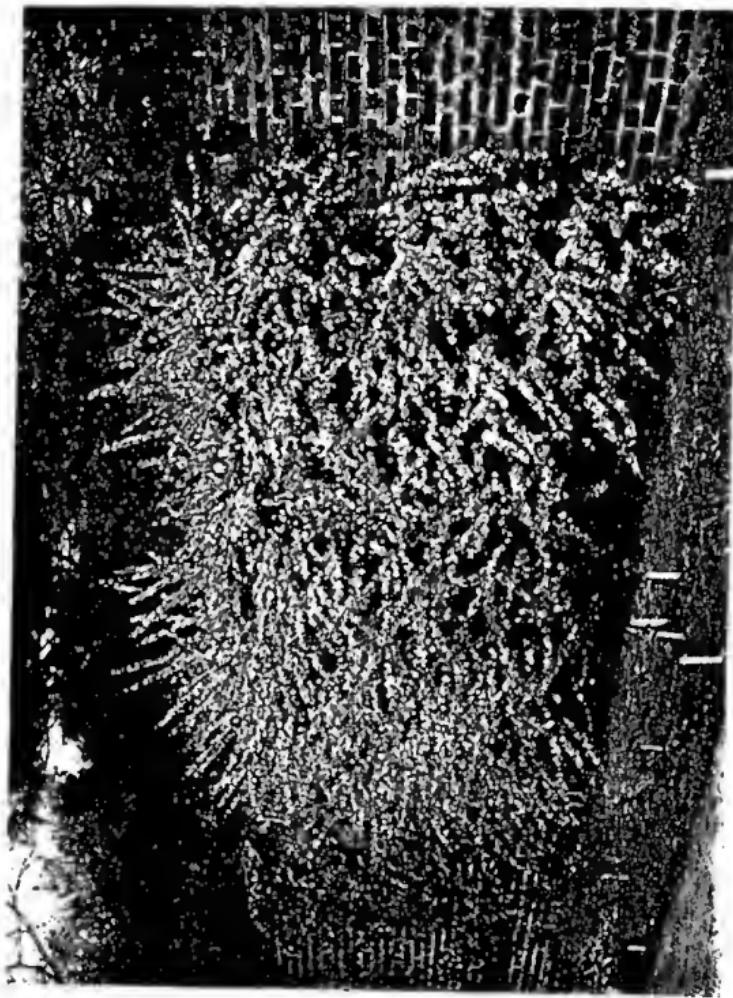
A native of China and Japan, introduced in 1804. It is hardy in the south-western counties, Ireland, &c., but near London requires the protection of a wall. Very easily cultivated and requiring no special soil. It is a very common evergreen in the gardens of the Riviera, Italy and Dalmatia. On the island of Lacroma near Dubronvik I have seen bushes 20 to 25 feet high.

POLYGONUM

(*Knotweed*)

P. baldschuanicum, the species of knotweed best known in gardens and the most ornamental, is now very familiar in suburban gardens and even in the backyards of small tenements. One of the most vigorous of all climbers it will make growths 15 feet or more long in one season; and for covering large vacant spaces quickly there is probably no woody climber to equal it. It is deciduous, capable of attaining heights of 40 to 50 feet and supports itself by twining. The leaves are broadly ovate, heart-shaped, or arrow-head-shaped, 2 to 4 inches long, pale bright green. The flowers, individually small (about $\frac{1}{2}$ inch wide) and white more or less tinged with pink, are produced in large loose panicles from July to October. They come in the utmost profusion.

A native of Bokhara, introduced about 1894. For covering



PRUNUS TRILoba PLENA

PRUNUS—PUERARIA

walls of all the members of this genus, which includes plums, cherries, peaches, almonds, apricots and cherry laurels. It belongs to the almond (or *Amygdalus*) section. The species is a native of China and this var. *plena* was introduced from the gardens of that country in 1855. It is a deciduous shrub 12 to 15 feet high, with leaves about 2 inches long, two-thirds as much wide, usually wider above the middle, and often more or less three-lobed at the apex. The flowers, which are very "double", pale pink, and $1\frac{1}{2}$ inches wide, develop about the beginning of April, singly or in pairs, from each of the buds on the shoots of the previous summer.

This almond is perfectly hardy in the open ground but is never seen so fine there as it is on a south wall. As soon as ever the flowers have lost their beauty the shoots that bore them should be pruned close back. During the summer new shoots 1 to 2 feet long will develop to bear, in their turn, the amazing profusion of blossom the following spring.

P. ilicifolia, a Californian species of the laurel group, is an evergreen shrub too tender in our average climate to succeed anywhere but against a wall. Its handsome shining green leaves, 1 to 2 inches long, nearly as wide and often heart-shaped at the base are armed on the margins with conspicuous, sharp, holly-like teeth. The white flowers are arranged in racemes as in the common laurel, but they are only 2 or 3 inches long, each blossom $\frac{1}{2}$ inch wide. This evergreen likes a sunny wall but is only worth a place, perhaps, where space is abundant. All the prunuses thrive in a calcareous soil.

PUERARIA THUNBERGIANA

(*Kudzu Vine*)

A very vigorous climber with thick tuberous roots and twining stems belonging to the pea family. Leaves trifoliate, the large middle leaflet 6 or 7 inches long, somewhat diamond-shaped, the two side ones obliquely ovate and smaller; all

WALL SHRUBS AND CLIMBERS

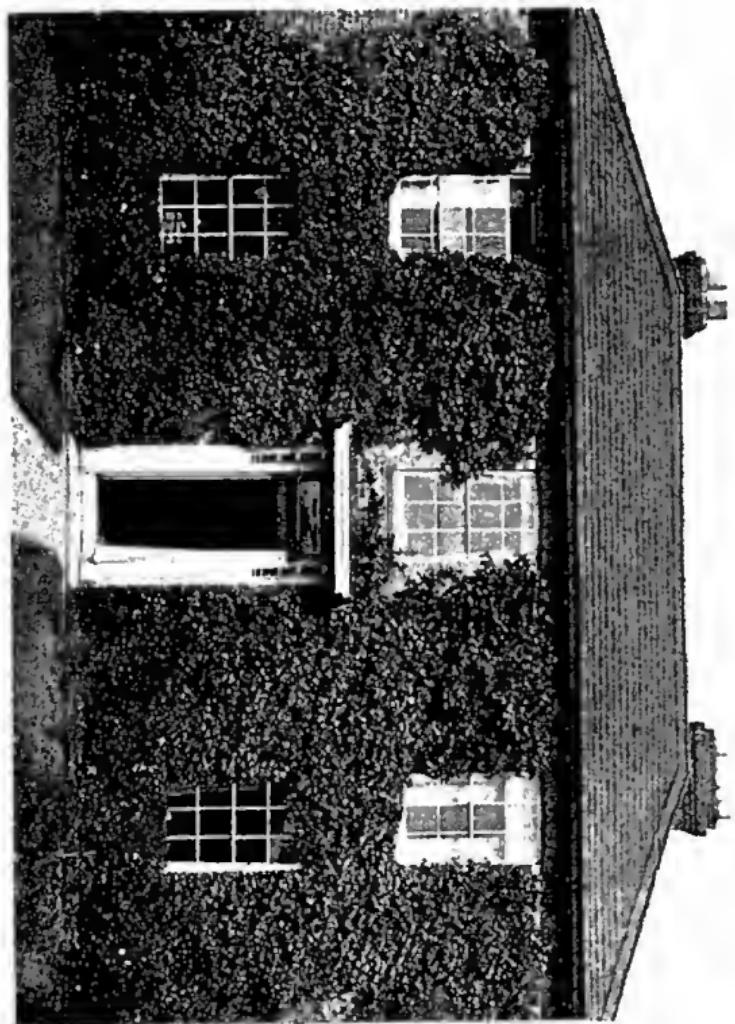
three are sometimes slightly lobed and more or less downy; leafstalks 4 to 8 inches long. The fragrant, violet-purple flowers open in July and August and are borne in racemes up to 10 inches long, each blossom $\frac{1}{2}$ to $\frac{3}{4}$ inch in length, pea-flower shaped. Pods 3 to 4 inches long, thickly covered with brown hairs.

Native of China and Japan and perhaps the quickest grower of all the climbers we can cultivate. Plants raised from seed sown in pots under glass in spring and planted out in good soil as soon as danger from frost is past will grow 20 feet long in a season. It is therefore useful for quickly covering unsightly objects or providing shade in summer. Its semi-herbaceous growths rarely survive winters in our cooler localities, but it is hardy on the south coast. It is seen in perfection in the south of France, but I have never seen it in flower in this country. On account of its quick luxuriant growth it has been used to ornament or clothe buildings of a temporary character, such as those erected for summer exhibitions.

PUNICA GRANATUM

(Pomegranate)

Naturally a small, bushy, deciduous tree 15 feet or more high, or a bushy shrub, the pomegranate is occasionally grown in the open in Cornwall and similar localities, and even in particularly sheltered corners near London. But it is best against a sunny wall. The leaves are usually opposite, narrowly oblong, not toothed, 1 to 3 inches long, $\frac{1}{2}$ to 1 inch wide, smooth, shining green. Flowers scarlet-red, 1 to $1\frac{1}{2}$ inches wide, petals normally five to seven, crumpled. Var. *plena*, whose flowers carry numerous petals, is the most ornamental form of pomegranate and the one best worth cultivating. The blossoms open from June to September, usually singly at the end of short shoots, but sometimes in pairs or



PYRACANTHA COCCINEA



DWARF POMEGRANATE. *PUNICA GRANATUM NANA*

PUNICA—PYRACANTHA

even more. A feature of the flower is the large, leathery, funnel-shaped calyx 1 inch long, which persists at the top of the fruit. Fruit between globose and orange-shaped, deep yellow, 2 to 3 inches wide; it rarely or never ripens in this country but is occasionally on sale in London shops for the sake of the sweet juicy pulp in which the numerous seeds are embedded. Var. *plena* has more showy "double" flowers. Var. *nana* is a dwarf variety useful for growing against a low wall. It increases very slowly in height and is rarely seen more than 3 or 4 feet high.

PYRACANTHA

There are some four or five species of pyracanth known, all of them evergreen and amongst the most handsome of all fruit-bearing shrubs. With the exception of *P. crenulata* and some forms of *P. angustifolia*, they are all hardy in the open ground and bear their fruits freely there. But owing to their easy cultivation and to their neat evergreen character they are popular wall shrubs in towns, where also the fruits have a better chance of escaping depredation by birds. Any walls, even those facing north, will suit them, and they are not in any way particular as to soil if it is reasonably fertile. *P. coccinea* is the oldest and best known in gardens of all the species, having been introduced from S. Europe in 1629. In the open ground it makes a small tree up to 15 or 20 feet high, but is more often a dense bush. Leaves 1 to $2\frac{1}{2}$ inches long, about one-third as wide, pointed, finely toothed; flowers white, $\frac{1}{2}$ inch wide, densely borne in June at the end of short twigs; fruits berry-like, orange-shaped, $\frac{1}{2}$ inch wide, bright coral-red. There is a popular variety of it called Lalandei, whose fruits are of a yellower red, or orange. These shrubs reach their full beauty in late September and, if unmolested by birds, the fruits remain on for some months. The species is excellent for covering walls.

WALL SHRUBS AND CLIMBERS

P. Rogersiana. Perhaps on the whole the most attractive of the pyracanths, this species is marked by its small leaves, only $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, $\frac{1}{2}$ to $\frac{1}{3}$ inch wide, broadest towards the apex. Fruits nearly globose, $\frac{1}{2}$ inch wide, varying in colour from yellow to reddish orange. The fruits remain in beauty until February and March, always assuming they have not been taken off by birds. It grows 12 feet or more high.

P. yunnanensis. The pyracanths are all very closely related and this one is chiefly distinguished by its leaves, which are from $1\frac{1}{2}$ to 3 inches long and $\frac{1}{2}$ to 1 inch wide, being distinctly broadest towards the end and quite rounded there. The fruits are coral-red when ripe, orange shaped, about $\frac{1}{4}$ inch wide, maturing later than either of the preceding species and remaining on the branchlets until March. Native of Yunnan, introduced in 1906.

P. atalantoides (syn. *P. Gibbsii*) is the strongest growing of the pyracanths and grows upwards of 20 feet high; it is consequently better suited for growing fully in the open than against a wall; the pointed leaves are up to 3 inches long.

RAPHIOLEPIS INDICA

This evergreen shrub is a native of Eastern China and was introduced in 1806. Naturally, it is a shapely rounded bush 10 feet and upwards high and as much or more in width. The leaves are inversely lanceolate or obovate, $1\frac{1}{2}$ to 3 inches long, about one-third as much wide, toothed except near the base, dark green. Flowers opening in spring in terminal clusters 2 to 3 inches long, each flower $\frac{1}{2}$ inch across, with the five petals white but tinged with pink towards the base. Stamens erect, numerous, with conspicuous yellow anthers.

Hardy in Cornwall, this shrub has not spread in cultivation. It can only be grown against a sunny wall in our average climate but, although quite attractive, is rarely seen there.

RAPHIOLEPIS—RHUS

It is one of the parents of the quite hardy R. Delacouri. A form with narrower leaves much tapered towards both ends has been called salicifolia.

RHAPHITHAMNUS CYANOCARPUS

An evergreen shrub or small tree introduced from Chile about 1843. The young shoots are covered with small bristles and armed with slender spines eventually $\frac{1}{2}$ to 1 inch long. Leaves in pairs or in threes, $\frac{1}{2}$ to $\frac{3}{4}$ inch long, not so much wide, very dark green. Flowers tubular, $\frac{1}{2}$ inch long, pale blue, opening singly or in pairs in the leaf-axils during April, Berry globose, bright blue, $\frac{1}{2}$ to $\frac{1}{2}$ inch wide. Whilst this shrub is quite happy in the mild S.W. counties, it requires wall treatment in cooler districts and is well worth it. Blue fruits are not common amongst shrubs and on few of them are the berries as large as on this.

RHUS TOXICODENDRON VAR. RADICANS

(*Poison Ivy*)

The typical "poison ivy" is a loosely spreading, deciduous shrub up to 9 feet high, but the var. radicans is a genuine climber, attaching itself to its supports by means of aerial roots like the ivy. It is mentioned here chiefly that it may be avoided. The sap is poisonous in that it produces blisters and eczema-like eruptions on the skin which are extremely painful. Some people, however, appear to be immune. The leaves are made up of three leaflets, each 2 to 5 inches long, the central one the largest. Before falling they acquire brilliant shades of red and orange which make the plant extremely attractive to those unaware of its evil properties. Native of N. America. This climber is sometimes grown under the names "Ampelopsis Hoggii" and "A. japonica". Gloves should always be worn when pruning or even handling it.

WALL SHRUBS AND CLIMBERS

RIBES

(Gooseberry. Currant)

R. laurifolium. A very distinct evergreen species of the unarmed (currant) group of the genus, introduced from Western China in 1908. It will grow up to 6 feet or more high on a wall, its leaves being 2 to 4 inches long, 1 to 2 inches wide, strongly veined, rather leathery, deep green, pointed and toothed. It is unisexual, and the flowers of the male plant come in drooping racemes 1 to 2 inches long, carrying about twelve flowers, each of which is $\frac{1}{2}$ inch wide and greenish yellow. It blossoms in February and remains long in good condition. The flowers of the female plant are more thinly disposed on rather longer racemes. Fruit of an elongated gooseberry shape, $\frac{1}{2}$ inch long, purplish black.

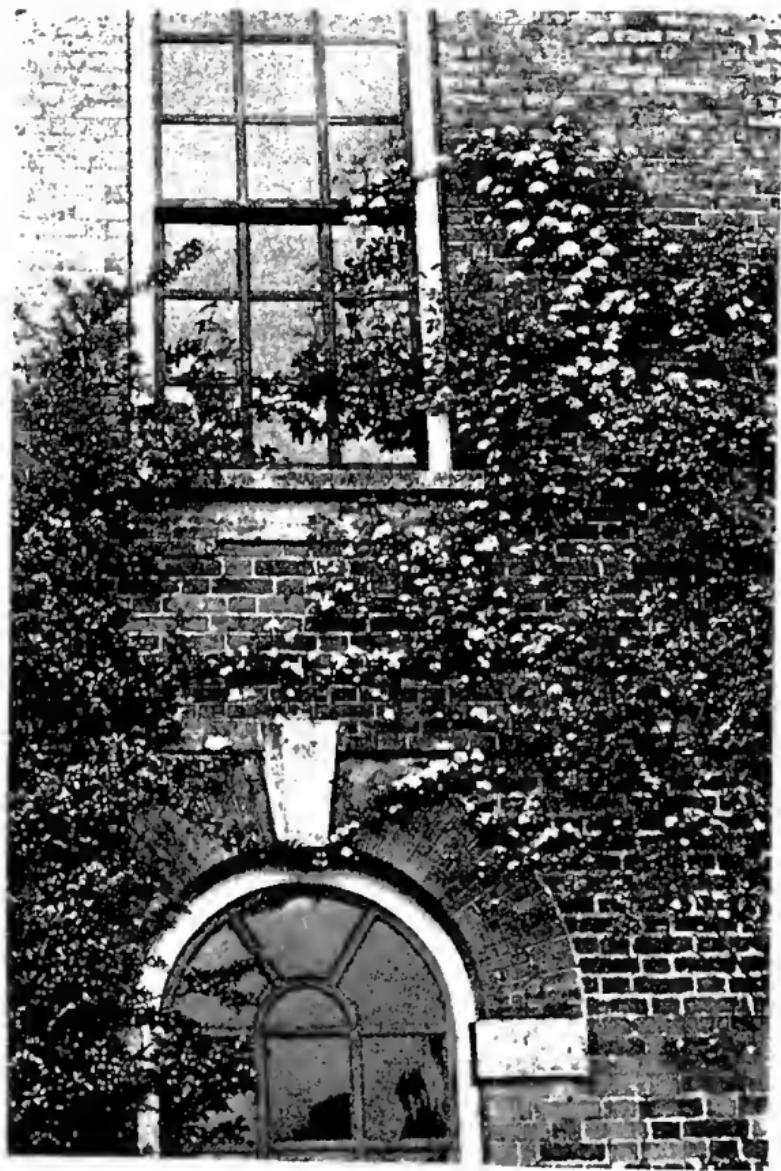
The charm of this species is in its early flowering and its evergreen character. Lady Moore speaks very highly of its beauty in her garden at Rathfarnham, near Dublin. It is hardy enough to grow without wall protection in most places, but its greater attractiveness on a wall makes it worthy of a place there.

R. speciosum. Also known as *R. fuchsoides*, this gooseberry is the most beautiful of all its group. The leaves in shape resemble those of the common gooseberry but are smaller and the branches are also spiny. Flowers pendulous, hanging in rows most attractively beneath the branches. Each flower is about $\frac{1}{2}$ inch long, tubular, rich red, two to four of them in hanging clusters; the stamens, also red, stand out $\frac{1}{2}$ inch beyond the corolla. This shrub is pretty hardy near London, but in colder parts makes an admirable wall shrub, growing up to 10 or 12 feet high, and flowering profusely in April and May. It is deciduous, but comes into leaf very early. Introduced from California in 1828.

R. viburnifolium differs from *speciosum* in belonging to the



PYRACANTHA ROGERSIANA



ROSA BANKSIAE PLENA

RIBES—ROSA

currant (as distinct from the gooseberry) group and in being evergreen as well as unarmed. It is far from being as beautiful. The ovate leaves are 1 to $1\frac{1}{2}$ inches long, scarcely as wide, bright green. The flowers, each $\frac{1}{2}$ inch wide, come in small clusters in April and are of a dull rose colour. The chief interest of this shrub is in the resin-dots or glands on the leaves which, when rubbed, give off a pleasant turpentine-like odour. This may give the plant sufficient interest for connoisseurs to grow it, but it will need a wall in any but the mildest counties. Introduced from Santa Catalina Island (off California) in 1897.

ROSA

(Rose)

The most beautiful and for the ordinary cultivator the most satisfactory of climbing roses are those which owe their origin to the skill of the hybridizer. Beautiful as the wild species mentioned below certainly are, none of them can rival in beauty such roses raised in gardens as, for instance, the old "Gloire de Dijon", "Marechal Niel", or the double-flowered variety of the yellow Banksian rose. It will be best, however, to give first a brief notice of the wild climbing species.

R. arvensis. A trailing or climbing deciduous rose with long thin branches bearing a few prickles; leaves with usually seven, sometimes five, leaflets. Flowers white $1\frac{1}{2}$ to 2 inches wide, with little or no fragrance, usually a few in a cluster or solitary; hips red. Var. *capreolata* (the Ayrshire Rose) is a superior form. Both are natives of the British Isles but neither is in the first rank.

R. Banksiae (Banksian Rose). A climbing evergreen shrub up to 40 feet high with slender, unarmed shoots; leaves with three or five leaflets; flowers white or yellow, 1 to $1\frac{1}{2}$ inches wide, borne numerously in clusters; fruits about the size of a pea. Besides the typical yellow and white single-flowered forms there are double-flowered forms of both colours. The

WALL SHRUBS AND CLIMBERS

most beautiful of these is the double yellow (*lutea plena*).

To see the Banksian roses at their best one must visit the gardens of S. France and Italy in April. There, plants trained on pergolas and posts, or allowed to clamber over trees, give some of the most entrancing pictures a garden can show. In the British Isles the plants lack the heat and sunshine from which they derive their health and they can only be expected to succeed on warm walls, as at Embley Park, near Romsey, where, 30 to 40 feet high on the house, the double yellow one flowers beautifully in April and May.

R. bracteata (Macartney Rose). This rose, a rambling shrub, owes its popular name to its having been introduced from China by Lord Macartney in 1793. It is one of the rare, truly evergreen roses, well marked by the very dark glittering green of its leaves with five to nine leaflets each $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, often broadly rounded at the end. Flowers white, solitary, very shortly stalked, 3 to 4 inches wide, delicately perfumed. It blossoms from June onwards, and is distinguished by the woolliness of several of its parts, including the young shoots, main leaf-stalks, sepals and fruits. It is not very hardy and near London must be given a wall up which it can be trained to a height of 12 feet or more. Better for the ordinary cultivator is a hybrid raised between it and *R. laevigata* called "Marie Leonida" or "alba odorata" with double flowers of a creamy white. Another handsome hybrid is "Mermaid" with sulphur-yellow flowers; this is hardier and can be trained on wires or up stakes, &c., in the open.

R. Brunonii (Musk Rose). This fine climbing rose comes from the Himalaya, whence it was introduced in 1822. It is generally grown under the name "moschata" to which species it is closely allied and with which it has been (and still is) united by some botanists. But what is now usually regarded as the true *moschata* is a native of the E. Mediterranean region including N. Africa. *R. Brunonii* is a strong climber, deci-

ROSA

duous, growing 20 to 30 feet high, its leaves consisting usually of five or seven leaflets each $1\frac{1}{2}$ to 3 inches long. The faintly scented flowers are borne numerously in clusters often 12 inches or more wide, each blossom 1 to $1\frac{1}{2}$ inches across, yellowish at first, but becoming pure, or nearly pure, white; they open in June and July. The best way of growing this beautiful rose is to follow nature and allow it to grow over a large bush or even a small tree of no particular importance. I know a plant which for forty years has grown over a large holly tree whose dark foliage shows up the white flowers of the rose in most effective contrast.

R. Wichuraiana. A prostrate rose from Japan. Leaves about 3 inches long, with five to nine roundish, shining green leaflets. Flowers in clusters, white, 2 inches wide, opening in July. Notable as one parent of a group of vigorous climbers, including "Dorothy Perkins".

R. gigantea. A native of the Shan Hills in Upper Burma whence it was introduced in 1889, this rose is remarkable as growing to a greater height and bearing larger flowers than any other wild species. Unfortunately it is tender and is seen at its best out-of-doors in such climates as that of the south coast, Devon, &c. It grows as much as 60 to 80 feet high and its solitary flowers are from 4 to 6 inches across, white, more or less tinged with yellow; leaves of usually seven leaflets, the largest $3\frac{1}{2}$ inches long. It needs all the sunshine it can get and is, of course, of interest to those only who live in a mild climate and can give it abundant space. It might be planted to grow over a large holly or other tree.

R. hemisphaerica (*R. sulphurea*). Sulphur Rose. This wonderful sulphur-yellow rose originated in the gardens of Persia or some other eastern country and it has been cultivated in England for well over 300 years. It will grow 10 feet or more in height, its slender prickly stems bearing distinctly glaucous leaves made up of five, seven, or nine

WALL SHRUBS AND CLIMBERS

leaflets. The flowers are solitary, drooping of their own weight, 2 inches or rather more wide, very full and heavy with petals, not scented. Not many people have been successful in this country with this rose. Our climate is too dull and damp for it, and in wet summers the flowers open reluctantly. I have never seen a really good plant in the London district, but grown on a sunny wall it is sometimes a great success in warmer country places. A plant laden with scores of its hanging yellow flowers is a wonderful sight. The soil in which it is planted must be well drained and may be improved by mixing mortar rubble with it.

R. laevigata. Cherokee Rose. A Chinese climbing species introduced to the S. United States sometime before 1780 and long naturalized there. It will grow 15 to 20 feet high, clinging to its support by means of hooked spines. Leaves of three leaflets which are shining green and 2 to 4 inches long. Flowers solitary, pure white, 3 to 4 inches wide, fragrant; they are said sometimes to be rose coloured. This fine rose is not very hardy and in our average climate needs wall protection. Rose "Anemone" is a hybrid between laevigata and a rose of the "Tea" family; the flowers are pink, large and borne in clusters—a lovely rose needing a wall.

R. setigera. Prairie Rose. A native of N. America and introduced in 1800, this is a climber up to 15 feet high with short hooked prickles, and leaves usually composed of three leaflets each 2½ to 3½ inches long and 2 inches wide, very coarsely toothed. Flowers 2 to 2½ inches wide, at first rose coloured, becoming paler with age, borne in July and August in clusters. This is a very vigorous rose making shoots several feet long in a season. Unfortunately, it has little or no fragrance, but is of value in being the latest to flower of all these climbing species. Several hybrids with double flowers have been raised from it such as "Baltimore Belle" and "Queen of the Prairies". It is hardy and can be grown in the

ROSA—CLIMBING ROSES

open, loosely trained up rough branches of oak fixed in the ground, on pergolas, &c.

GARDEN VARIETIES OF CLIMBING AND PILLAR ROSES

The roses of garden origin are now so numerous—they can only be estimated by hundreds—that even the climbing group of varieties can merely be touched on here. I have to thank Mr. E. L. Hillier of the Winchester nurseries for help in selecting the following lists of excellent varieties.

In the notes on pergolas in the introductory chapters of this book I have mentioned that it has often been found advantageous in planting these structures to supplement the climbers (which are usually apt to become naked towards the base) by using shrubs of a dwarfer character to furnish the uprights. The same plan holds good with pergolas wholly or partly given up to roses; and for the purpose of clothing the uprights a list is appended of suitable "pillar" roses. Both climbing and pillar roses are very attractive trained up poles and in some gardens charming effects are achieved by planting them in rows or even as an avenue. They may also be used to add variety and diversity to herbaceous borders.

The garden roses have been so much hybridized and interbred that it is sometimes difficult to recognize their parentage. As regards these climbing and pillar varieties an indication of the group to which they are usually assigned is given below by abbreviations as follows: B, Bourbon; C, China or Monthly; H.M, Hybrid Musk; H.T, Hybrid Tea; P, Polyantha; T, Tea; W, Wichuraiana.

CLIMBING ROSES

Alberic Barbier; creamy white with yellow centre, semi-double, early; a rampant grower. W.

WALL SHRUBS AND CLIMBERS

Albertine; coppery-pink opening paler pink, double, glossy foliage, mid-June. W.

American Pillar; deep pink with white centre, single; a rampant grower with large clusters. End of June. P.

Blush Rambler; single, pale pink, very large clusters, mid-season. P.

Chaplin's Pink Climber; semi-double, pink, produced well into autumn. H.T.

Climbing Caroline Testout; climbing form of a very fine, well-known, fragrant variety; double, silvery salmon. H.T.

Climbing Daily Mail; terra-cotta or coral-red shaded with yellow and prawn red, fragrant. H.T.

Climbing Lady Hillingdon; deep apricot. H.T.

Climbing Madame Butterfly; pink suffused with apricot, fragrant. H.T.

Climbing Ophelia; flesh-pink, shaded rose, fragrant. H.T.

Crimson Conquest; crimson-scarlet, very free.

Dorothy Perkins; a very popular rose with large clusters of clear pink, double flowers, late. W.

Doctor W. Van Fleet; soft flesh pink, large, double, mid-June. W.

Easlea's Golden Rambler; yellow with crimson splashes. W.

Emily Gray; deep yellow, double, fine foliage, mid-June. W.

Evangeline; white petals tipped with pink, single. W.

Excelsa; similar to Dorothy Perkins in growth, &c., but the flowers are red. W.

Gloire de Dijon; a famous old variety, buff with yellow centre.

Jersey Beauty; pale yellow, single, large clusters, mid-June. W.

Le Reve; semi-double, yellow, early, very free.

Madame Alfred Carrière; pure white, very fragrant, June to November. A rampant grower.

CLIMBING ROSES—PILLAR ROSES

Madame Gregoire Straehelin; crimson, splashed with carmine, very fragrant; also known as "Spanish Beauty".

Mermaid; sulphur yellow; a hybrid from *R. bracteata*.

Paul's Scarlet Rambler; vivid scarlet, semi-double, large clusters, mid-June. W.

Snowflake; often considered the best white rambler rose, free, late flowering. W.

Wichuriana grandiflora; pure white with golden anthers, borne in large elegant panicles; mid-June. W.

PILLAR ROSES

Carmine Pillar; bright rosy carmine, single, abundant and continuous flowering.

Cupid; semi-double, flesh peach, softening to opal.

Fellenberg; rosy crimson, very free, semi-double. C.

Kathleen Harrop; soft shell pink, very fragrant. B.

Lady Waterlow; salmon pink with golden centre, vigorous.

Madame Jules Gravereaux; lemon-yellow with rosy peach centre.

Pax; semi-double, pure white, early- and late-flowering. H.M.

Paul's Lemon Pillar; pale lemon, sturdy growth.

Penelope; shell pink shaded saffron, fragrant, good autumn rose. H.M.

Petite Odette; soft shell pink, large, double, continuous flowering. W.

Phyllis Bide; pale gold fringed with pale pink, semi-double.

P.

Tausendschon; soft rose, large clusters, fragrant. P.

The New Dawn; soft flesh pink, continuous flowering. W.

Thisbe; yellow, large trusses, early and continuous blooming. H.M.

Una; large white flowers.

WALL SHRUBS AND CLIMBERS

Zephyrine Drouhin; china pink, semi-double, fragrant, vigorous, continuous blooming; very few thorns. B.

RUBUS

(*Bramble. Blackberry. Raspberry*)

The climbing brambles and raspberries are of no great importance to the generality of cultivators and are of interest chiefly to those who specialize in uncommon plants or are imbued with the collector's spirit. Scarcely any of them have any notable beauty of blossom, but they show a remarkable diversity in their often handsome and striking foliage. They are neither adapted for, nor worthy of, cultivation on walls and are probably seen to best advantage when grown up poles of larch, oak or other trees which have had the side branches left a foot or two long. To these, leading shoots may be tied, leaving the smaller branches to hang free. Grown in this way in a shrub border they stand out noticeably elegant.

They all like a good loamy soil and are benefited by an occasional overhauling with the knife, cutting out older worn-out growths.

There is no necessity to give very detailed descriptions of these climbing species for, as already stated, the flowers are usually inconspicuous and the fruits (except in *R. laciniatus*) of little value.

R. australis, from New Zealand, is a remarkable botanical curiosity whose leaves are often "skeletonized" so that the leaf-blade is undeveloped and the leaf consists merely of the stalk and the mid-rib of each of the three leaflets—all armed with hooked prickles. In some forms the leaf-blade is more developed. It is a tall climber in warm climates, but not particularly hardy.

R. bambusarum, an evergreen Chinese species, has long, very slender whitish stems and leaves made up of three to five

RUBUS

leaflets each $2\frac{1}{2}$ to 5 inches long and $\frac{1}{2}$ to $\frac{3}{4}$ inch wide; they are pointed, dark green above, white beneath. Near this is *R. Henryi*, but its leaves are merely lobed, not divided into separate leaflets. Both will grow 15 feet or more high.

R. flagelliflorus. An evergreen Chinese species with slender, whitish shoots and leaves 6 to 7 inches long and 3 or 4 inches wide, slender-pointed, heart-shaped at the base, dark green above, yellowish felted beneath. Very elegant when trained loosely up a pole 10 feet or so high.

R. hupehensis. A semi-deciduous climber with slender dark stems and simple leaves of oblong-lanceolate shape about 4 inches long, scarcely half as wide, long-pointed, rounded at the base, covered with grey felt beneath. The inflorescence is very glandular-hairy. Fruit black. Central China, 1907.

R. laciniatus is now often grown on trellises for the sake of its sweet, blackberry-like fruits. It is, in fact, one of the blackberries and produces freely its fine clusters of large, excellently flavoured fruits. It will grow some 7 or 8 feet high; leaves three- or five-lobed, the lobes very much subdivided. On vigorous plants the leaves will be 6 to 9 inches long and really handsome. Its origin is unknown but it may be a native of Britain.

R. lineatus. A deciduous or more or less evergreen rambler (according to climate) the slender stems downy. The leaves consist usually of five leaflets arranged at the end of a stalk in the same way as those of the horse chestnut. These leaflets are 4 to 9 inches long, 1 to $2\frac{1}{2}$ inches wide, the lowest ones the smallest; dark green above, the under-surface is of a beautiful shining silvery hue. They are also remarkable for the number of their closely set parallel veins of which, in the larger ones, from thirty to fifty pairs may be counted. A remarkably distinct and handsome species from W. China but too tender for our average climate.

R. omeiensis comes from Mt. Omi in W. China and is a very

WALL SHRUBS AND CLIMBERS

vigorous, deciduous shrub making growths several feet long in a season. Leaves maple-like, 3 to 7 inches long and wide. The black fruits I have not seen but they are said to be well-flavoured.

R. Parkeri. A deciduous climber with very shortly-stalked leaves of narrowly ovate shape, pointed, 4 to 7 inches long and about half as wide, covered beneath with reddish brown down. It is remarkable for the dense glandular covering of similar colour on the inflorescence, especially on the calyx. Central China, 1907.

R. Playfairianus. An evergreen rambling shrub with very slender dark stems and leaves composed of three to five leaflets at the end of a stalk 2 inches long. Each leaflet is of lanceolate shape, the middle one much the largest and up to 6 inches long. Fruit a raspberry, black. China, 1907.

R. tricolor (syn. *polytrichus*) is more of a prostrate, creeping character than a climber. It is evergreen in the warmer counties, its heart-shaped leaves 3 or 4 inches long, dark green above, whitish-felted beneath; the shoots are densely clothed with bristles. Fruit red, of good flavour, but not, I believe, plentifully borne. Its abundant foliage makes it an admirable ground cover in shady places. China, 1908.

SABIA

The sabias are a little known group of shrubs, mostly or all climbing and native of Eastern Asia. They are of little importance in gardens, and require no special conditions.

S. latifolia, introduced from Western China in 1908 is a deciduous climber growing some 10 feet high. The leaves are toothless, more or less oval, pointed, 2 to 5 inches long and 1 to 3 inches wide. Flowers small and only about $\frac{1}{2}$ inch wide, made rather globose by the incurvation of the five petals; three flowers are usually borne together on a short stalk springing from the leaf-axils in May; they are greenish yellow

SABIA—SARGENTODOXA

changing to reddish brown. Fruit bright blue in two sections that form a rather globose whole $\frac{1}{2}$ inch long.

S. Schumanniana is of similar habit but differs in its narrowly oblong leaves which are 1 to 4 inches long but only $\frac{1}{2}$ to $1\frac{1}{2}$ inches wide. The flowers, which come in May in axillary clusters of three, are $\frac{1}{2}$ inch long, cup-shaped by the incurving of the petals, greenish to dull purple, followed by blue, kidney-shaped fruits $\frac{1}{2}$ inch long. Western China, 1908.

SALVIA GRAHAMII

This is a species of sage introduced from Mexico about 1830. It is a semi-woody evergreen growing some 3 or 4 feet high with square young shoots. The opposite leaves are up to 3 inches long and nearly half as wide, pointed, dull green; they have, when crushed, an odour like that of black currant leaves. Flowers borne, usually in pairs, rather densely on erect racemes up to 6 inches long terminating the shoots; they are about 1 inch long, rich red, the "lip" of the corolla $\frac{1}{2}$ to $\frac{3}{4}$ inch wide.

Although near London this sage is tender enough to exist precariously even against a wall, it is hardy in the warm southern and south-western counties in the open ground. It blooms from June onwards for two or three months and its beauty is such as to make it well worth wall protection in the colder places. Mr. Marchant records its success as a wall plant on Salisbury Plain. It prefers a southern exposure but is quite satisfactory facing west. Easily increased by cuttings.

SARGENTODOXA CUNEATA

A deciduous climber with twining stems growing 25 feet or more high. Leaves composed of three leaflets which are borne on a stalk 2 to 4 inches long. The side leaflets are obliquely or one-sidedly ovate, 2 to 4 inches long; the central one obovate and rather smaller; all three rich glossy green.

WALL SHRUBS AND CLIMBERS

Flowers unisexual, the sexes on separate racemes which are pendulous, 4 to 6 inches long. The flowers have no petals, only sepals, which are $\frac{1}{2}$ inch long, six in number, greenish yellow. The female racemes develop purple-blue, globose fruits, each $\frac{1}{2}$ inch wide.

Native of China, introduced in 1907. This is a climber of great botanical interest and in itself constitutes a Natural Order. It resembles *Sinofranchetia* in growth and foliage and, like it, is a plant for lovers of curiosities. It first flowered on a wall at Warnham Court in Sussex, in May, 1922.

SCHIZANDRA

A genus of aromatic climbers related to the magnolias, which support themselves by twining round their supports. About half a dozen species are in cultivation, all deciduous. The flowers come in the leaf-axils and are unisexual and handsomely coloured; the female or fruit-bearing ones have the berries strung on a stalk which lengthens as they ripen until ultimately it becomes pendulous and may be from 2 inches to as much as one foot long, the part carrying the berries usually longer than the bare, basal part. The elongation of the main fruit-stalk in this fashion as the fruits ripen is unusual in hardy climbers and very interesting. Schizandras are usually grown against a wall or on a pergola but support may also be afforded them by fixing rough branches in the ground.

S. chinensis has long been in cultivation, having been introduced in 1860. It will grow 20 to 30 feet high. The sparsely toothed leaves are 2 to 4 inches long; the flowers pale rose, fragrant, $\frac{1}{2}$ to $\frac{3}{4}$ inch across, produced during April and May in twos or threes; fruits $\frac{1}{2}$ inch long, globose to fig-shaped, scarlet, borne on a stalk, 4 to 6 inches long.

S. Henryi has triangular young shoots; bright green, variably shaped leaves up to 4 inches long, glaucous beneath; and

SCHIZANDRA—SCHIZOPHRAGMA

white flowers $\frac{1}{2}$ inch wide, on a stalk 2 inches or so long. *S. glaucescens* has not the angled shoots of *Henryi*, its leaves are shorter stalked, flowers orange red, fruits scarlet on stalks up to 6 inches long. *S. pubescens* is distinguished by its leaves being densely downy beneath, flowers yellow, fruits red.

S. rubriflora, grows 10 to 20 feet high, its mostly obovate leaves 3 to 5 inches long; flowers deep crimson, 1 inch wide, opening in April and May; fruits red, about the size of a pea, closely packed towards the end of a stalk from 6 to 10 inches long. One of the handsomest. China, 1907.

S. sphenanthera grows up to 16 feet high, its young shoots reddish, leaves up to 4 inches long; flowers orange, $\frac{1}{2}$ inch wide; fruit red and developed on a stalk lengthening to 6 or 9 inches long. W. China, 1908.

SCHIZOPHRAGMA

A genus of deciduous climbers consisting of two species, one from Japan, the other from Central China. They cling to their supports in the same way as the ivy does, that is to say by means of aerial roots. Closely akin to the hydrangeas, they are distinguished by the sterile flowers being reduced to one bract-like sepal which becomes enormously enlarged—sometimes 3 inches long by $1\frac{1}{2}$ inches wide—and constitutes the chief attraction of the inflorescence. In *Hydrangea*, it will be remembered, each sterile blossom consists of four or five pretty uniform sepals.

Schizophragmas are easily grown but, being very vigorous, are not always easily accommodated; they may be planted against tree trunks, or given a place on a fairly lofty wall, or used on pergolas. I have even seen them planted to cover a low unsightly building almost entirely, roof and all. They like a good loamy soil and are easily increased by means of cuttings.

WALL SHRUBS AND CLIMBERS

S. hydrangeoides from Japan grows 40 feet or more high in a wild state. Leaves opposite, long-stalked, broadly ovate, 3 to 5 inches long and two-thirds as much wide, strongly veined, very coarsely toothed, hairy on the veins beneath. Flowers small, yellowish white, produced during July in flattish clusters 6 to 8 inches across. As noted above, the chief feature of the inflorescence are the bract-like sepals mentioned above, which are heart-shaped, pale yellow, $\frac{1}{2}$ to $1\frac{1}{2}$ inches long.

S. integrifolia, introduced from China in 1901, differs from the preceding in its larger leaves, which normally are toothless; also in the large creamy white sepal of the sterile blossoms being much larger, up to $3\frac{1}{2}$ inches long and of ovate outline. In nature this species is often found growing up the face of rocky cliffs 40 feet or more high. A variety of it with very downy leaves and leaf-stalks has been named "mollis". Both flower in July.

SEMELE ANDROGYNA

(*Ruscus androgynus*)

In several of the Cornish gardens this remarkable climber may be found growing luxuriantly. It is a close relative of *Ruscus* ("butcher's broom") and *Asparagus*, renewing itself as they do by sucker shoots springing from the rootstock. These shoots are twining, $\frac{1}{2}$ inch thick and carry what appear to be pinnate leaves $1\frac{1}{2}$ to 3 feet long and bearing up to as many as twenty-four leaflets. These "leaflets" are, however, really flattened branches such as we find in butcher's broom and they bear flowers in clusters of three to twenty on their margins, each blossom $\frac{1}{2}$ inch wide, yellowish. Botanists call them "cladodes". They are of ovate-lanceolate to cordate shape, pointed, polished dark green, from 2 to $4\frac{1}{2}$ inches long. The foliage is very thick and luxuriant and the plant grows up to 60 feet high. It is not hardy at Kew

SCHIZOPHRAGMA INTEGRIFOLIA





SOLANUM CRISPUM

See page 156

SEMELE—SINOFRANCHETIA

but there is a fine example in the Temperate House there.
An anomalous member of the Lily family.

SENECIO SCANDENS

A semi-woody or herbaceous climber belonging to the groundsel family, widely spread in China and native of India also. It has been known to botanists since 1825, but has only appeared in cultivation in comparatively recent times, probably through the agency of Forrest or Kingdon Ward. It is said to grow some 15 to 20 feet high, scrambling over bushes, &c., rather than attaching itself to them.

The leaves are ovate-lanceolate or narrowly triangular, pointed, toothed, 2 to 4 inches long, sometimes halberd-shaped at the base (hastate). Flower-heads daisy-like, each $\frac{1}{2}$ inch wide, bright yellow, produced rather thinly on wide, terminal, compound panicles. It blossoms from July to October in its wild state. Captain Kingdon Ward in October, 1926, writes of it in the Seingku Valley as "scrambling through thickets and appearing on the outside in big festoons of flower... it is the most conspicuous plant now in bloom at 6-7,000 feet altitude". It will probably need wall protection in most parts of the country.

SINOFRANCHETIA CHINENSIS

A deciduous climber of twining habit growing 20 to 30 feet high. The leaves consist of three leaflets borne on a stalk curiously long and slender, purplish and 6 to 9 inches in length; the leaflets themselves are 3 to 5 inches long, the middle one somewhat diamond-shaped, the side ones obliquely ovate. Flowers unisexual, whitish, small and of no beauty, borne on a pendent raceme elongating to 8 inches or more in the fruiting stage. The many-seeded berries are about $\frac{1}{4}$ inch long, rather grape-like but tapered at the end, blue-purple. Easily grown and hardy, this climber is to be

WALL SHRUBS AND CLIMBERS

recommended only to those who take an interest in uncommon plants. A native of China introduced in 1907. Closely related to *Akebia*, *Holboellia*, &c.

SINOMENIUM ACUTUM

A vigorous deciduous climber growing 20 feet or more high, supporting itself by its twining, slender, smooth stems. The leaves are very variable in shape (it has been known as "diversifolium"), sometimes heart-shaped, sometimes shallowly or deeply three- to five-lobed, often of intermediate shapes; they vary 2 to 6 inches in length and from $1\frac{1}{2}$ to 4 inches in width, dark green. The flowers come in slender panicles up to 10 inches long and are yellow and quite small, the chief beauty of the plant being in the blue-black, globose fruits each about $\frac{1}{2}$ inch wide. Native of China and Japan, introduced in 1901.

This twiner is unisexual, so plants of both sexes are necessary to obtain fruits. It is not the kind of climber to grow where space is limited, but for a lengthy pergola it may be worth a place. Quite hardy and not particular as to soil. Related to *Cocculus* and *Menispernum*.

SMILAX

Known popularly as "green briars", this curious genus of climbing plants belongs to the lily family, though anything more unlike the lily in general appearance than they are, it would be difficult to conceive. Some are evergreen, others deciduous; they may grow 10 to 30 feet high; and the usually hard, wiry stems support themselves by means of tendrils springing from the base of the leaf-stalk (these are really developments of the stipules). They are not well adapted for wall cultivation, often suckering freely from the base and forming lumpy, heavy masses of stems more suitable for clambering over mounds or upturned tree-stumps, or trained

SMILAX

up rough oak-boughs stuck in the ground than for walls. They have little beauty of flower, but the fruits are often handsome. Given a good loamy soil, their cultivation presents no difficulty.

S. aspera. Being the only smilax found wild in Europe, this evergreen species has some geographical interest; it is a familiar plant in the gardens of the Riviera, South Italy, &c. But it is rather tender and really only suited for the south and south-western maritime counties. It grows 8 to 10 feet high, its stems spiny. Leaves variable in shape, but nearly always arrow- or heart-shaped at the base, pointed, five- to nine-veined, prickly on the margin, 1½ to 4 inches long, ¾ to 3 inches wide. Flowers green, fragrant, borne in racemes up to 4 inches long. Fruit red, ½ inch wide, glabrous.

S. hispida. Hag Briar. Stems as much as 30 feet long, bristly and prickly; leaves ovate to heart-shaped, 2 to 6 inches long, three-fourths as wide, prominently nerved; flowers greenish yellow, fruit globose, blue-black, about ½ inch wide. Native of Eastern N. America, deciduous and very hardy.

S. megalaantha. This species, introduced from China in 1907, is the finest of all the smilaxes hardy with us. It is quite hardy and evergreen, its foliage is large and beautifully glossy, and its fruit is red and unusually big. Unfortunately it is still very rare. It grows 15 to 20 feet high, the stems are spiny and the leaves (very variable in size) are 3 to 9 inches long and 1 to 6 inches wide, the fruit globose, ½ inch wide, coral-red.

S. rotundifolia. Horse Briar. A native of N. America whence it was introduced in 1760, this is now the best known of smilaxes in this country. It is very hardy and easily grown. In good soil it will grow 10 feet or more high, its clustered stems being slender, wiry and spiny, the branches angled. It varies from deciduous to semi-evergreen, according to the severity of the winter, the leaves being ovate to broadly

WALL SHRUBS AND CLIMBERS

heart-shaped and 2 to 3 inches long. Flowers quite small, greenish yellow. Fruits roundish, blue-black, $\frac{1}{2}$ inch wide.

SOLANUM

These two species of Solanum are scarcely climbers in the strict sense of the word, having neither tendrils, aerial roots, twining shoots, nor hooked prickles by which to support themselves. They are better described as vigorous "ramblers". Neither requires a very rich soil but both enjoy abundant sunshine. Whatever pruning is necessary should be done in spring before growth commences.

S. crispum is a Chilean species introduced in 1830, more or less evergreen according to the degree of winter cold it has to endure, and quite unarmed. The leaves vary in length from $2\frac{1}{2}$ to 5 inches, scarcely half as much wide. Flowers produced very freely from June to September in clusters up to 6 inches across; they are bluish purple with a fine cluster of yellow stamens in the centre, each blossom 1 to $1\frac{1}{2}$ inches wide. It is hardy on a wall near London, but is seen at its best more to the south and west. Var. *autumnalis* (also known as the "Glasnevin variety") is the best form because of its longer flowering season. Lord Aberconway has it very fine at Bodnant in N. Wales.

S. jasminoides, an evergreen native of Brazil, is somewhat more tender than *crispum* and more slender in growth. The glossy green leaves are very thin in texture and vary from 1 to 3 inches in length and from $\frac{1}{2}$ to 2 inches in width, often lobed. The flowers come in loose clusters borne in great profusion from July to November. Each flower is $\frac{1}{2}$ inch wide, pale blue in the type, white in the form most usually cultivated (var. *album*).

These two species will grow 20 feet or more high, and must be included amongst the handsomest of out-door climbers.

SOLLYA—SOPHORA

SOLLYA HETEROPHYLLA

(*Blue-bell Creeper*)

A twining evergreen shrub up to 6 feet or more high with very slender stems. Leaves linear-oblong, very shortly stalked, $1\frac{1}{2}$ to 3 inches long, $\frac{1}{8}$ to $\frac{1}{4}$ inch wide. Flowers of five petals and about $\frac{1}{4}$ inch wide, somewhat cupped, produced in nodding clusters of usually about five, but occasionally of as many as nine; they are of a lovely blue and open during summer and autumn.

This charming plant is a native of Australia and has been in cultivation for more than a century, but owing to its tenderness it is usually grown in conservatories. In the warmer counties it makes a charming plant for a low wall or for a vacant place below taller plants; even in the suburbs of London has been known to survive several winters with some kind of covering in hard weather.

S. parviflora (syn. *S. Drummondii*) is occasionally offered by nurserymen although now quite rare, one reason for which probably is that it is not so ornamental as heterophylla. It is very slender and twining (more so than heterophylla) and its leaves are also smaller, from $\frac{1}{2}$ to $1\frac{1}{2}$ inches long, $\frac{1}{16}$ to $\frac{1}{4}$ inch wide, linear, more or less downy, especially on the margins. Flowers azure blue, solitary, in pairs or rarely in threes, each about $\frac{1}{4}$ inch wide. It was featured in a Belgian periodical (*La Belgique Horticole*) in 1854. It is a native of the Swan River region in West Australia and will require the same treatment as heterophylla. It flowers from July onwards. These two climbers are closely related to Billardiera.

SOPHORA

There is a section of this genus, which is found in New Zealand and Chile, that was at one time kept generically distinct under the name of "Edwardsia". It differs from what may be

WALL SHRUBS AND CLIMBERS

termed the true sophoras in having flowers with forward-pointing petals instead of the pea-like ones the others have. The best known species of this group is

S. tetraptera, introduced from New Zealand in 1772, but also a native of Chile. It is naturally evergreen but loses most of its foliage out-of-doors in our cooler districts, where it can only be regarded as safe planted against a sheltered wall or, still better, a nook formed by the union of two walls at right angles. In such a place it need only have the leading shoots secured. It is a smallish tree 20 to 40 feet high, the young shoots, flowerstalks and leafstalks being covered with a tawny down. Leaves pinnate, each one 3 to 6 inches long, made up of leaflets varying in number from thirteen up to fifty which are $\frac{1}{2}$ to $\frac{3}{4}$ inch long and of more or less oblong shape. The fewer the leaflets the larger they are individually. Flowers golden yellow, opening in May and June, four to eight in a raceme, each 1 to 2 inches in length, the petals pointing forward and giving it a somewhat tubular shape. The seed-pod is 2 to 8 inches long and remarkable in having four thin ridges running lengthwise also in being much constricted between each seed and thus suggesting a rough comparison with a necklace. The "Kowhai" of New Zealand.

Var. grandiflora has larger, comparatively few (thirteen to twenty-five) leaflets and fine flowers fully 2 inches long. It is the best form of a beautiful tree.

Var. microphylla has usually very numerous leaflets only $\frac{1}{2}$ to $\frac{1}{4}$ inch long. In the same group comes

S. macrocarpa, from Chile, an evergreen, usually smaller tree than *tetraptera* and sometimes merely a low shrub. The pinnate leaves consist of from one to two dozen leaflets, each $\frac{1}{2}$ to $1\frac{1}{2}$ inches long. Flowers yellow, 1 to $1\frac{1}{2}$ inches long borne four to twelve together in short racemes. This handsome species is very distinct from the previous species in its larger leaflets and especially by its seed-pods having no

SOPHORA—STYRAX

"wings" or thin ridges running lengthwise, although they are, similarly, much constricted between the seeds. It is succeeding well against south walls at Kew and Exbury, growing slowly but giving a fine show of flowers every May. At its best, with a crowd of racemes clustered on a branch, say 1 foot long, it is remarkably effective.

STAUNTONIA HEXAPHYLLA

An evergreen climber with twining stems found wild in Korea and Japan. It is very vigorous and capable of growing 30 feet or more in height. The leaves are made up of from three to seven quite separate, stalked leaflets, which are ovate to elliptical in shape, pointed, stout in texture, 3 to 5 inches long, each with a stalk 1 to 2 inches long. The fragrant flowers are unisexual, both sexes occurring in the same plant; a few of them are borne in short racemes, each $\frac{1}{2}$ inch wide, the pointed petals white, tinged with violet. This climber is occasionally grown on walls, where its stems will form a thick tangle. In nature it climbs over trees. Sir Hugh Daly on his house, Buckland Grange, near Ryde, got it to bear fruit in the autumn of 1936. The fruit is an egg-shaped pulpy berry about 2 inches long, tinged with purple.

STYRAX WILSONII

(*Wilson's Storax*)

Naturally, this is a deciduous bushy shrub from 6 to 10 feet high and it was introduced from W. China in 1908. It has slender downy branchlets and small ovate leaves $\frac{1}{2}$ to 1 inch long, more or less lobed towards the bluntness apex. The nodding flowers are pure glistening white, about $\frac{1}{2}$ inch wide, produced in June singly on a short stalk from the leaf-axils or in racemes of two or three blossoms. The centre of the flower is filled with a columnar cluster of ten yellow stamens.

Whilst this storax is hardy enough to succeed fully in the

WALL SHRUBS AND CLIMBERS

open in the milder counties it needs some protection in our average climate. It may be planted against a south, east, or west wall, and a corner position would be very suitable. Only its main or leading shoots need be fastened to the wall, in other respects allowing the plant to grow at will, and pruning it merely to keep it within suitable limits. Seen at its best it is one of the most charming of white-flowered shrubs. Another species too tender for the open ground is *S. officinalis*, the small tree native of Greece and Asia Minor which produces the fragrant resin known as "storax". The flowers are fragrant, white, $1\frac{1}{2}$ inches across, produced in clusters of three to six during June. I have never seen it really well in blossom chiefly because I have never seen a really good plant.

TEUCRIUM FRUTICANS

(*Shrubby Germander*)

An evergreen shrub of open lax growth and attaining 7 or 8 feet in height, introduced from S. Europe by the then Duchess of Beaufort in 1714. Its opposite leaves are ovate, 1 to $1\frac{1}{2}$ inches long, green above, covered beneath with a close white felt, fragrant like so many of the mint and lavender family to which it belongs. The flowers are borne in racemes 3 to 4 inches long and continue to appear during summer and autumn; they are curiously shaped, the main feature being the deeply five-lobed base (commonly called the "lip") measuring 1 inch in length and width. The colour is lavender-purple.

This shrub is too tender to grow fully in the open near London but on account of its late-flowering character and pretty blossom is well worth a place on a wall. It grows best in a soil of a lightish nature and flowers more freely if it is not very rich. A few years ago Mr. Collingwood Ingram of Benenden, Kent, introduced a form from the Atlas Mts.

TEUCRIUM—TRACHEOSPERMUM

which has larger flowers than those of the ordinary form and much richer and deeper in colour. It should eventually displace the common type in gardens.

TRACHEOSPERMUM

(*Rhyncospermum*)

Evergreen climbers of twining habit and with a milky sap, of which two species are in cultivation. The better known of the pair is

T. jasminoides, a native of China introduced in 1844, but chiefly as a cold-greenhouse plant, where it is often planted to cover walls. But it may also be grown on a sheltered wall out-of-doors near London. The rather leathery leaves are narrowly oval and pointed, 2 to 3 inches long and dark lustrous green. Flowers very fragrant, appearing for several weeks in summer in slender-stalked clusters 2 to 3 inches wide, each flower 1 inch across, pure white with five spreading wavy lobes and a small round hole in the centre in which the stamens are hidden. This species will grow 10 to 12 feet high. Var. *variegatum* has leaves edged and blotched with creamy white.

A variety commonly known as *T. jasminoides japonica* is of more importance. It has larger leaves (sometimes 3 inches long by 1½ inches wide), is much more vigorous and probably hardier. In the Angers district of France I have seen it covering the whole front of a house much as ivy does with us. It is possibly a distinct species. The second species,

T. asiaticum (syns. *divaricatum* and *crocostomum*), a native of Japan and Korea, is by no means so common as *jasminoides*. A plant formed a dense evergreen covering several yards wide on a west wall at Kew for many years. The leaves are 1 to 2 inches long, glossy dark green and the fragrant flowers are rather smaller, creamy white and open in July.

WALL SHRUBS AND CLIMBERS

TRICUSPIDARIA

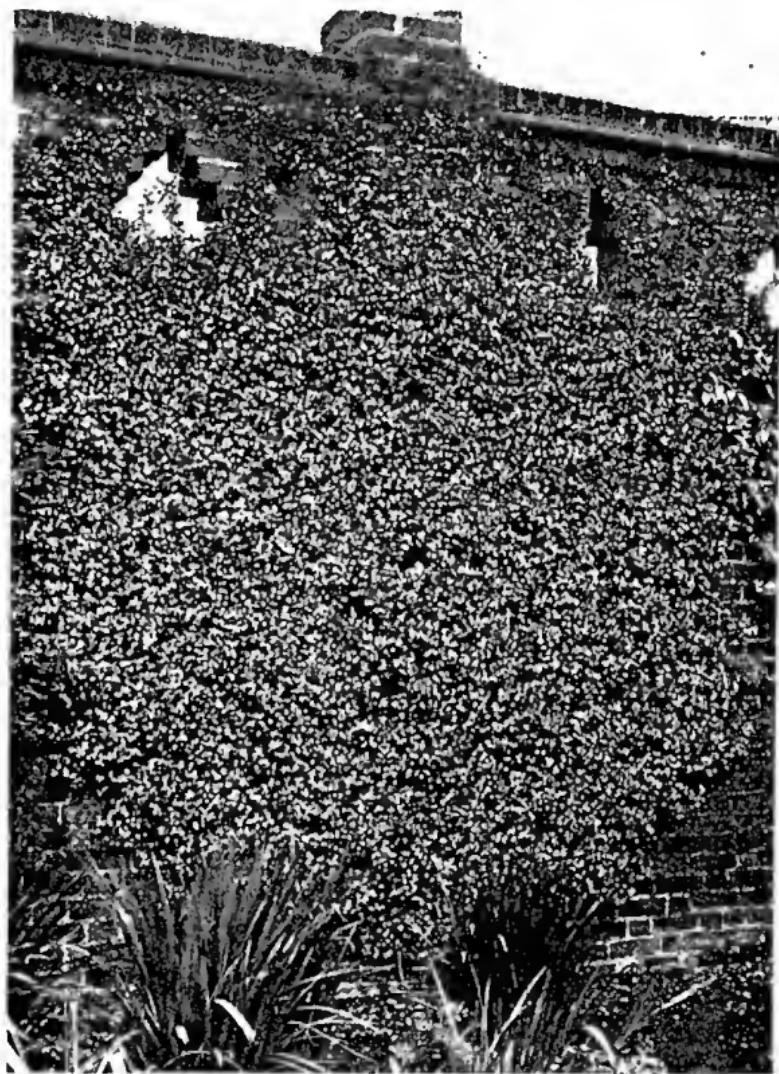
There are two species of *Tricuspidaria* (also known as "Crinodendron") in cultivation, the better known and handsomer one being *T. lanceolata*. Both are small, evergreen trees or shrubs from Chile.

T. dependens has leaves 1 to 3 inches long, half as wide, with wavy and widely toothed margins. Its flowers, white, bell-shaped, $\frac{1}{2}$ inch long and borne singly on a pendulous stalk 1 to 2 inches long, open in July and August. There are five stoutish petals, each with three large teeth at the end. *T. lanceolata*, introduced in 1848, has stiff, hard-textured leaves $1\frac{1}{2}$ to 4 inches long, one-third as wide, toothed. The pendulous flowers, rich crimson, 1 to $1\frac{1}{2}$ inches long, are borne singly on stiff stalks 2 to 3 inches long, the fine fleshy petals closing in towards their tips and thus making the flower urn-shaped. A curious characteristic of this shrub is its habit of pushing forth flower buds on short stalks in autumn, in which state they remain through the winter, not opening fully until the following May and June.

These shrubs are too tender to be grown fully in the open near London but *T. dependens* succeeds very well on a wall facing east, north or west, all being better than a sunny south one. *T. lanceolata* is still more shade-loving and may be grown on a sheltered north wall. Pruning should be done after flowering and consists merely in cutting away too outstanding growths. It is often grown under the name *Crinodendron Hookerianum*.

TRIPTERYGIUM FORRESTII

A deciduous climber growing up to 30 feet high and making angular, unbranched shoots several feet long in a season. Leaves alternate, oval to ovate, shortly pointed, toothed, 3 to 4 inches long and about half as much wide, with a stalk



TRACHELOSPERMUM ASIATICUM



Photo : Blanche Henry

VIBURNUM RHYTIDOPHYLLUM

TRIPTERYGIUM—VIBURNUM

$\frac{1}{2}$ inch or less in length. I have not seen flowers but they are very small and come in panicles up to 6 inches long, dull in colour and apparently of little account.

The beauty of this climber, apart from its foliage, is in the fruits, which are winged like those of an elm but with three wings to each fruit instead of two; each measures $\frac{1}{8}$ inch in length and the colour is described as dull purplish crimson. As the panicles are up to 6 inches or perhaps more long and half as much wide, they should give a fine effect in autumn. A native of W. China, introduced in 1906. It likes a good loamy soil and is suitable for a pergola or to grow over a failing or unimportant tree.

VERONICA HULKEANA

So far as beauty of blossom is concerned this is the most attractive of all shrubby veronicas. It is a native of the South Island of New Zealand, and was introduced about 1860. Of rather loose, straggling habit, it is only about 3 feet high in a wild state, but grown on a wall, as it usually is with us, it will become twice as tall. The leaves come in pairs on the branchlets and are 1 to 2 inches long, about half as wide, coarsely toothed, lustrous green. The flowers, each $\frac{1}{2}$ to $\frac{1}{4}$ inch wide and of a charming delicate shade of lavender or lilac, are produced in pyramidal panicles 8 to 12 inches or even more long. They are borne in great profusion, so much so that the plants appear frequently to suffer from over-flowering. For this reason the inflorescences should be removed as soon as the flowers fade, thereby avoiding development of seed—an exhausting function.

Near London, where it flowers in May and June, it must be given a place on a wall to which its leading shoots may be attached. It can then be left to grow free and unpruned.

VIBURNUM

Of the under-mentioned species of Viburnum, the first three

WALL SHRUBS AND CLIMBERS

only can satisfactorily be grown fully in the open in the warm southern or south-western counties. Near London and in our average climate generally they need some protection. They are best against a wall, not actually nailed or otherwise attached to it (except as regards leading shoots) but planted as near as possible to its base. They do not need any systematic pruning but when inclined to occupy too much space they can be reduced by removing or shortening back the most outstanding growths. They like a good loamy soil.

V. macrocephalum, introduced from China in 1844, is a deciduous, or partly evergreen, shrub growing from 6 to 12 feet high in this country, but said to be as much as 20 feet high in China. It is a purely garden shrub and its huge, May-borne flower trusses are made up of large, flat, pure white blossoms, each 1 to 1½ inches wide and, being without stamens or pistil, always sterile. The trusses are of globular shape, closely packed with flowers and up to 6 inches wide, making this the finest in bloom of all the viburnums. The wild type from which it is derived is known as var. *Keteleeri*; this has the centre of its trusses filled with small fertile blossoms, the sterile ones on the margin only. It is far inferior to *V. macrocephalum*, which, as regards blossom, may be regarded as the most remarkable of viburnums.

V. japonicum is of about the same hardiness as the preceding, that is to say it will live in the open ground near London, but unhappily, and is much more satisfactory if given wall shelter. It is a genuine evergreen growing up to 6 feet or more high, with dark, shining green leaves 3 to 6 inches long, half to nearly as much wide. Flowers white, very fragrant, in flattish clusters 3 to 4 inches wide; they are all small and fertile. Fruit red. Native of Japan.

V. odoratissimum is somewhat less hardy than either of the preceding and is of no use near London away from a wall. It is an evergreen with unusually fine foliage, the burnished

VIBURNUM—VITEX

green, leathery leaves being 4 to 8 inches long and half as wide. The flowers (white) come in broadly pyramidal panicles 3 to 6 inches high; they are all small and fertile and their chief attraction is in their fragrance. In the southwest it makes a very handsome shrub and is 20 feet high in places. In smokeless districts no evergreen shrub has a more distinguished glitter on the leaves than this. Fruit red, then black. Introduced from China in 1818, but native also of Korea and India. Although

V. rhytidophyllum is quite hardy, it is much inclined in cold winters and especially in exposed positions to put on a dejected appearance and is then scarcely ornamental. It is much happier-looking when grown on a wall and it also flowers and bears fruit more freely there. An evergreen shrub 8 to 15 feet high, its leaves have a very distinct, almost unique, appearance on account of the excessive wrinkling of their upper surface due to a dense net-work of deeply set veins. They are 4 to 9 inches long and about one-third as wide. The small dullish white flowers open in May or June in trusses up to 8 inches across, followed by large crops of handsome oval fruits $\frac{1}{2}$ inch long, at first red (in September), finally black.

VITEX AGNUS-CASTUS

(*Chaste Tree*)

In the average climate of our country a wall is necessary to grow the chaste-tree satisfactorily and, flowering as it does in September, it is well worth it. It is deciduous and will grow 10 to 12 feet high. The leaves are made up of five to seven radiating leaflets, each leaflet 2 to 6 inches long, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, slenderly tapered, usually toothless. The fragrant flowers are pale violet, $\frac{1}{2}$ inch wide, tubular, with five spreading lobes, borne in densely packed clusters encircling a flowerstalk up to 6 or 8 inches long, which develops at end of

WALL SHRUBS AND CLIMBERS

the current season's growths. There are often shorter ones also from the terminal leaf-axils. The whole plant has a pleasant, rather pungently aromatic scent. It likes full exposure to sun and the soil need not be rich. Var. *alba* has white flowers.

Native of the Mediterranean Region; cultivated in England nearly four hundred years ago. The pruning of wall-grown plants is necessary—a general shortening back of the branchlets that flowered the previous autumn; this can be done in late January or February.

VITIS

(*Vine*)

This genus is a very large one and, if we include *Ampelopsis*, *Parthenocissus* and *Cissus*, often regarded as distinct genera, there are altogether some fifty to sixty species hardy in this country. The grape vine, *V. vinifera*, is the typical representative of the largest section, which consists of strong deciduous climbers with large, usually lobed leaves and pulpy fruits; they attach themselves to their supports by twining tendrils. All of them are easily grown in good soil and those cultivated in restricted spaces have to be pruned back during the winter. For covering walls most of the true vines are scarcely ornamental enough to be worth their place, for they have no flower beauty and are usually too coarse and strong-growing. The foliage of some species, however, turns a handsome colour in autumn. They are good on pergolas, on posts and chains and valuable also planted to clamber over decrepit or unimportant trees. A very limited selection of species is all that is needed here.

The common grape vine, *V. vinifera*, is sometimes grown for its interest and will occasionally develop palatable grapes if given a sunny wall, but a warm summer is essential. Two of its varieties are sometimes grown for ornament, viz.,

VITIS

apiifolia ("cut-leaved" or "parsley" vine) with leaves divided into numerous narrow segments; and *purpurea* ("dyer's grape") whose leaves are claret red at first, afterwards heavy purple.

V. Coignetiae, a Japanese vine of exceptionally vigorous growth and remarkable for the size of its leaves, which are 8 to 12 inches wide, is highly valued for the scarlet and crimson colouring of its fading leaves. It is not surpassed in this respect by any of the true vines. Another fine-leaved Asiatic vine is *V. amurensis* which also colours well in autumn changing as it does to shades of crimson and purple. Both will clamber over big trees.

V. Davidii (also called *V. armata*) is very distinct and easily recognized by the young shoots being covered with straight or slightly hooked prickles. The leaves are up to 8 inches wide, of the typical vine shape, and turn a vivid red in autumn.

V. flexuosa var. *parvifolia*. This is one of the two vines which have got into gardens under the name of "*V. flexuosa var. Wilsonii*". It is a small climber with leaves usually 2 to 3 inches long, coarsely toothed, of a brilliant, even glittering, green above, and purple beneath when young. Perhaps the daintiest of all true vines and the one best adapted for growing on a wall. Introduced from Central China in 1900. Turning to the *Parthenocissus* group (distinguished by the leaves being divided into five or three leaflets—but often simple in *V. inconstans*) we have the Virginia creeper, *V. quinquefolia*, well known by its five coarsely toothed leaflets, each up to 4 inches long, radiating from the end of a common stalk, and for its fine autumnal colouring. It is a high climber of great vigour and, owing to its tendrils being furnished with sucker-like disks at the tips, it is capable of clinging of itself to walls or tree trunks. Very similar to it and having the same popular name is

V. vitacea, but it lacks the adhesive tips to the tendrils and

WALL SHRUBS AND CLIMBERS

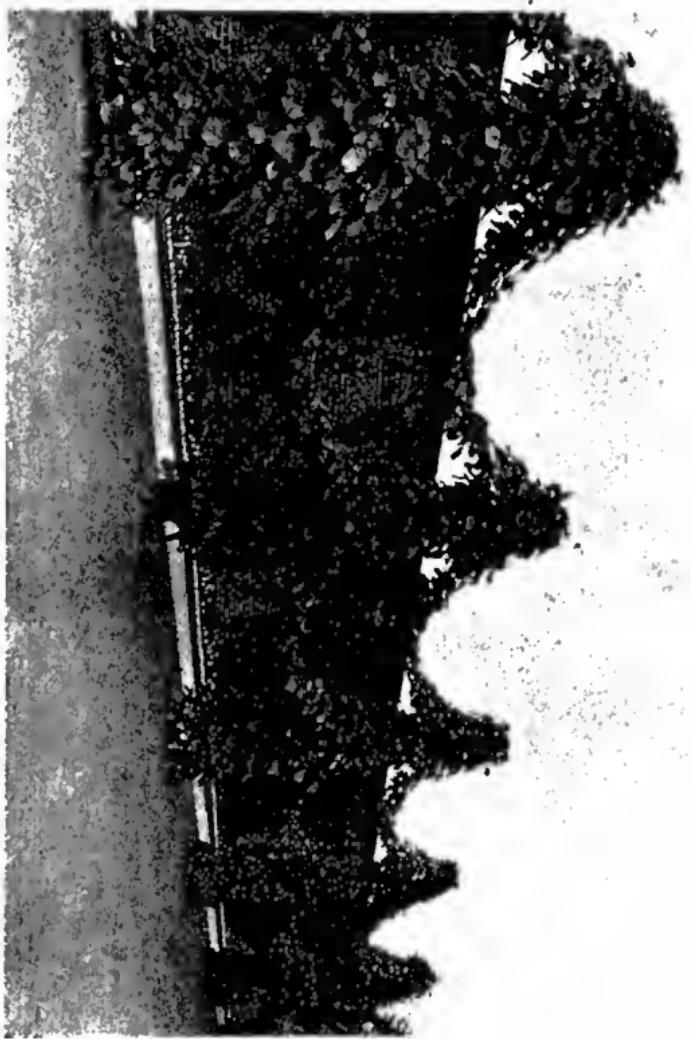
is unable to cling to bare, flat surfaces. It is often used for covering summer houses and for affording shade to out-door refreshment gardens, &c. By training leading shoots along horizontal rafters, its pendulous branches will form charming leafy curtains several feet long.

V. Henryana has leaves composed of three or five leaflets each 3 or 4 inches long, dark green, the chief veins being picked out in silvery white and pink. This creeper will cling unaided and is especially valuable for covering lofty walls facing north, where its variegation is much better defined than on sunny walls. A similar vine is **V. Thomsonii** from Central China whose leaves, normally of five leaflets, are wholly of a claret purple when young and very pretty then. **V. inconstans**, found wild in Japan and Central China, was introduced in 1862 from the former country. The name "Virginia creeper" so often given to it is, therefore, quite erroneous. It is now perhaps, next to ivy, the commonest of wall climbers, being self-supporting and turning to lovely red or crimson shades in autumn. It will grow 60 feet high. As ordinarily seen the leaves are 3 or 4 inches wide, these being characteristic of the barren, rapid-growing shoots. Leaves made up of three leaflets are also common and when the plant reaches the fruiting stage the leaves become much larger and 8 inches or more wide; the branches are also short and sturdy. Commonly known as "Ampelopsis Veitchii".

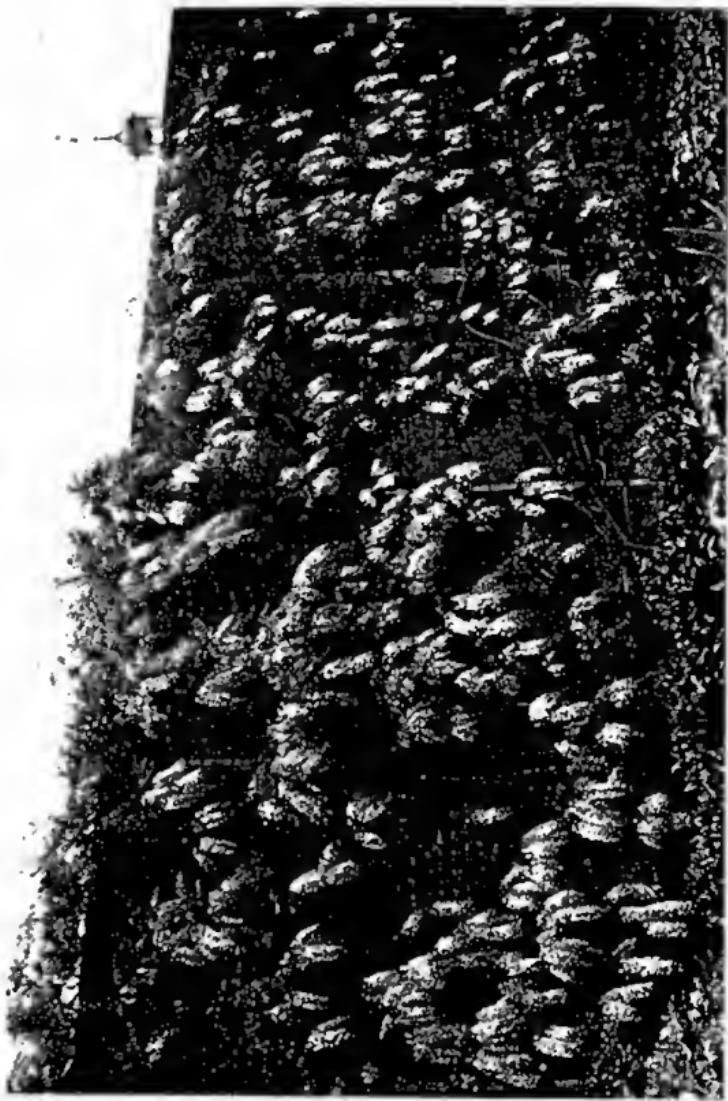
Next have to be mentioned a few of the Ampelopsis group. For walls or for training loosely up poles or pillars, **V. aconitaeifolia** and **V. serjaniaefolia** from Japan, and **V. arborea** from N. America are handsome on account of their much divided, coarsely toothed leaves.

V. heterophylla (syn. *Ampelopsis heterophylla*) is one of the best of the vines in regard to the beauty of its fruits which come in rather small clusters and are porcelain blue with tiny black dots, each about $\frac{1}{8}$ inch wide. Leaves very variable in

VINES (*VITIS*) AT ALDENHAM



WISTARIA CHINENSIS



VITIS

shape but often roundish or heart-shaped, 2 to 4 inches wide. In order to obtain good crops of berries, this vine should be grown on a sunny wall and the best plant I have seen as regards freedom in fruiting was growing where the root space was restricted.

V. megalophylla is a very remarkable vine, introduced from China in 1894. The compound ("bipinnate") leaves are $1\frac{1}{2}$ to 2 feet long and as much wide, each of the numerous leaflets being 2 to 5 inches long and about half as much wide, coarsely toothed. A large leaf will carry as many as sixty leaflets. This ampelopsis will grow 30 to 40 feet high.

V. striata. Also known as *Cissus striata*, this is of interest as the only evergreen vitis we can grow out-of-doors. It is too tender to succeed very well at Kew, where, even on a wall, it is cut back to ground level in cold winters. The slender stems are angled and zig-zagged; the leaves being $1\frac{1}{2}$ to 3 inches wide and consisting mostly of five, but sometimes only three, leaflets. These are stalkless, oblanceolate, sparsely toothed, $\frac{1}{2}$ to 2 inches long. Apart from the attractive foliage, its chief beauty is in the berries which are the size of small peas and borne in great profusion. According to Mr. Comber (who collected it in Chile in 1925 and found it with stems 80 feet long) they are jet black and shining when ripe; and all the plants that have borne fruit in this country have had them similarly coloured but with a purplish tinge in process of ripening. But there seems to be some variation in colour. The species is also a native of Brazil and collectors in that country always describe the berries as red, one of them even as "scarlet", and are enthusiastic as to its beauty. It would appear, therefore, that there are two distinct races of this vine and that probably none of the plants in cultivation has come from Brazil.

This climber is self-supporting and clings to its support by means of viscous-tipped tendrils.

WALL SHRUBS AND CLIMBERS

WEINMANNIA TRICHOSPERMA

An evergreen tree from the Andes of Chile, where it is found up to 40 feet high. It is hardy in our milder counties, even in Sussex, but is seen at its best in Devon and Cornwall. Near London it has to be given wall treatment which, if space is not very limited, it deserves for the dainty, rather fern-like beauty of its foliage. The leaves are pinnate, up to 3 inches long and each consists of $4\frac{1}{2}$ to $9\frac{1}{2}$ pairs of leaflets set $\frac{1}{2}$ to $\frac{1}{2}$ inch apart on the mainstalk, leaving room between each pair for a wedge-shaped "wing", the whole dark lustrous green. The flowers are quite small, dullish white, fragrant, closely packed in cylindrical racemes 2 inches long, opening freely even on small plants in April and May.

WISTARIA

A genus of twining deciduous climbers named after Caspar Wistar, an American scientist (1761-1818); the term *Wisteria* so commonly used is, therefore, erroneous. It is not a large group and the species of interest to most cultivators are only three, viz., *chinensis*, *floribunda* and *venusta*, but they and their varieties occupy a very important place amongst hardy climbers. These are Asiatic; two other species from N. America—*frutescens* and *macrostachya*—both in cultivation, are of lesser note.

Wistarias are easily cultivated and grow well in any soil of good or even moderate quality. They can be grown on walls, pergolas, cages, arbours, &c., and even allowed to run over tall trees. Trees partially enveloped by wistaria make especially glorious pictures in Italian gardens in April, and even in England, as is shown by our picture of an oak tree at Tittenhurst in Berkshire, it can be made to give almost, if not quite, as splendid a display. Such plants can be left to their own devices, but those growing in circum-

WISTARIA

scribed spaces have to be kept within bounds by pruning. The long annual shoots not required to increase the area of the plant should be shortened back to about one foot in length in August and cut back again to within an inch or two of the older wood during winter. Left unpruned, plants are apt to develop a thick tangle of slender, intertwining stems which do not flower. Blossom is only produced by the buds at or towards the base of the shoots. As is well known the Asiatic wistarias can be kept to a shrubby state and from (say) 5 to 8 feet high by means of this biennial pruning. None of the wistarias give of their best in shady positions.

W. chinensis is the common species which, introduced from Canton in 1816, has for over one hundred years made one of the finest features in our gardens. In some respects it is the finest of all deciduous climbers. Of great vigour, it climbs over lofty trees in a wild state and, as noted above, is capable of doing so in cultivation. Even on walls in Britain old plants may be found spreading out 100 feet each side of the main stem. It may very well be trained along the top of a wall leaving room beneath for tender shrubs. The pinnate leaves are usually composed of nine or eleven narrowly ovate leaflets, each $1\frac{1}{2}$ to $3\frac{1}{2}$ inches long. The pendulous racemes, 8 to 12 inches long, carry numerous pea-shaped flowers each about 1 inch long and of mauve or deep lilac colour. They open simultaneously in late May. There is a white-flowered variety—*alba*, and one with "double" flowers—*plena*. A second, smaller crop of blossom often comes in August on the current year's shoots.

W. floribunda. A tall climber growing 30 feet or more high with leaves consisting of eleven to nineteen leaflets each $1\frac{1}{2}$ to 3 inches long, narrower, more shining and less downy than those of *chinensis*, also more numerous. The violet-blue flowers come in slender, pendulous racemes normally 5 to

WALL SHRUBS AND CLIMBERS

12 inches long; they are rather smaller than those of chinensis, are set farther apart on the mainstalk, and open successively from the base in late May and June. Var. macrobotrys is the now accepted name for what has long been known in gardens as "W. multijuga". It is a remarkable product of Japanese gardens, developing as it does racemes usually 2 to 3 feet long, but occasionally 4 feet, and known even to exceed 5 feet. Owing to this length of raceme, it is best grown on a pergola or on overhead structures where they can hang free and show to best advantage. Var. alba has white flowers on racemes intermediate in length between the type and macrobotrys; var. rosea has pale rose-coloured flowers and var. Russelliana darker ones than the type.

W. venusta, introduced from Japan in 1912 is, in general appearance, very like chinensis, but the leaves are permanently downy on both surfaces, the blossom comes in shorter racemes and the flowerstalks are much more downy. Flowers white, opening in May and June.

The two N. American species, *W. frutescens* and *W. macrostachya*, are quite hardy. The latter, whilst not equal to the Asiatic species, is still quite handsome and is worth growing because it flowers later, in June and July. The lilac-purple blossom is borne in dense racemes up to 12 inches long and opens successively from the base.

INDEX



INDEX

WALL SHRUBS

(Synonyms are printed in italics)

Abelia Engleriana	27	Blackberry	146
<i>floribunda</i>	27	Bois puant	33
<i>Schumannii</i>	27	Bottle-brush	44
Abutilon megapotamicum	28	Bowkeria Gerrardiana	40
<i>vexillarium</i>	28	Box Thorn	114
<i>vitifolium</i>	28	Bramble	146
Acacia armata	29	Broom	69
<i>Baileyana</i>	29	Montpelier	70
<i>cultiformis</i>	29	Buddleia auriculata	41
<i>dealbata</i>	29	Colvilei	41
<i>juniperina</i>	29	Bupleurum fruticosum	41
<i>leprosa</i>	29	Buplever, Shrubby	41
<i>longifolia</i>	29	Bursaria spinosa	42
<i>podalyraefolia</i>	29		
<i>pulchella</i>	29	Caesalpinia Gilliesii	42
<i>retinodes</i>	29	Calceolaria integrifolia	43
<i>Riceana</i>	29	Callistemon acuminatus	44
<i>verniciiflua</i>	29	<i>citrinus</i> <i>splendens</i>	45
Acradenia Frankliniae	29	lanceolatus	44
Adenocarpus decorticans	32	pallidus	44
Anagyris foetida	33	salignus	45
Anthyllis Barba-Jovis	33	viridiflorus	45
<i>Hermanniae</i>	33	Camellia japonica	45
Aplopappus ericoides	34	<i>reticulata</i>	45
Aristotelia Macqui	35	saluenensis	46
<i>Atragene alpina</i>	55, 56	Sasanqua	45
<i>macropetala</i>	60	<i>speciosa</i>	46
Azara Gilliesii	36	Thea	45
<i>integrifolia</i>	37	Carpenteria californica	48
<i>lanceolata</i>	36	Ceanothus dentatus	49
<i>microphylla</i>	36	<i>floribundus</i>	50
Bead-tree	117	Gloire de Versailles	49
		<i>integerrimus</i>	50

INDEX OF WALL SHRUBS

Ceanothus Lobbianus	50	Daphne odora	71
papillosus	50	Dendromecon rigidum	72
rigidus	50	Desfontania spinosa	73
thyrsiflora	51	Dicentra chrysanthia	73
Veitchianus	51	Dichotomanthes tristanii-	
Cestrum aurantiacum	53	carpa	74
elegans	52	Diospyros kaki	74
Parqui	52	Diplacus glutinosus	74
Chaste Tree	165	Discaria Toumatou	75
Chian Turpentine Tree	130	Drimys Winteri	75
Chimonanthus fragrans	53		
Clethra arborea	63	Escallonia Donard Hybrids	79
Delavayi	63	Iveyi	79
Cocculus laurifolius	65	macrantha	79
Colquhounia coccinea	66	montevideensis	79
Corokia buddleoides	66	organensis	79
Cotoneaster	66	pterocladi	79
macrocarpa	66	punctata	78
virgata	67	rubra	78
Coronilla glauca	67	Edwardsia	157
valentina	67	Eriobotrya japonica	78
Cotoneaster horizontalis	67	Eucryphia Billardieri	80
microphylla	68	Eugenia apiculata	123
Crape Myrtle	101	Luma	123
Crinodendron Hookerianum			
	162	Fabiana imbricata	81
	138	violacea	81
	68	Fallugia paradoxa	82
Cydonia japonica	68	Feijoa Sellowiana	82
	68	Fendlera rupicola	83
Cytisus Battandieri	70	Folhadão	63
	70	Fremontia californica	84
monspessulanus	70		
palmensis	69	mexicana	85
Perezii	69	Freylinia cestroides	85
Porlock	71	Garrya elliptica	86
proliferus	69	Germander, Shrubby	160
supranubius	70	Gooseberry	138
Daisy-bushes	124	Grevillea rosmarinifolia	87
Daphne Daphniphyllum	71	sulphurea	87
hybrida	71		

INDEX OF WALL SHRUBS

<i>Habrothamnus elegans</i>	52	<i>Magnolia Delavayi</i>	115
<i>Hibiscus syriacus</i>	90	<i>grandiflora</i>	115
<i>Hoheria angustifolia</i>	91	<i>nitida</i>	116
<i>populnea</i>	91	Mastic Tree	130
<i>sexstylosa</i>	92	<i>Melia Azedarach</i>	117
<i>Hypericum Leschenaultii</i>	94	<i>Michelia compressa</i>	119
		<i>figo</i>	119
		<i>fuscata</i>	119
<i>Illicium anisatum</i>	95	<i>Mimosa</i>	
<i>floridanum</i>	95	<i>Mimulus glutinosus</i>	
<i>religiosum</i>	95	Mint Bush	132
<i>Indigofera Gerardiana</i>	95	Myrtle	122
<i>Itea ilicifolia</i>	96	Crape	101
<i>yunnanensis</i>	96	<i>Myrtus communis</i>	122
		<i>Luma</i>	123
		<i>Ugni</i>	123
<i>Jerusalem Sage</i>	128		
<i>Jupiter's Beard</i>	33	<i>Olea europaea</i>	123
		<i>Olearia erubescens</i>	124
<i>Kakee</i>	74	<i>odorata</i>	125
<i>Kerria japonica</i>	100	<i>Solandri</i>	124
<i>Khasian Privet</i>	106	<i>virgata</i>	124
		Olive	123
<i>Laburnum, Evergreen</i>	130	<i>Osmanthus Delavayi</i>	125
<i>Lagerstroemia indica</i>	101	<i>Osteomeles Schwerinae</i>	125
<i>Lavandula dentata</i>	103	<i>subrotunda</i>	126
<i>Stoechas</i>	104		
<i>Lavender, Toothed-leaf</i>	103	<i>Pentstemon cordifolius</i>	127
<i>Leptospermum flavescens</i>	105	<i>Persimmon, Chinese</i>	74
	105	<i>Philadelphus Coulteri</i>	128
<i>Liversidgei</i>	105	<i>mexicana</i>	128
<i>pubescens</i>	105	<i>Phlomis fruticosa</i>	128
<i>scoparium</i>	105	<i>Phygellus capensis</i>	129
<i>Ligustrum confusum</i>	106	<i>Piptanthus nepalensis</i>	130
<i>Lily-of-the-Valley-Tree</i>	63	<i>Pistacia Lentiscus</i>	130
<i>Lindera praecox</i>	106	<i>Terebinthus</i>	130
<i>Lippia citriodora</i>	107	<i>vera</i>	130
<i>Loquat</i>	78	<i>Pittosporum Tobira</i>	131
<i>Loropetalum chinense</i>	113	<i>Privet, Khasian</i>	106
<i>Lycium chinense</i>	114	Pomegranate	134

INDEX OF WALL SHRUBS

<i>Prostranthera rotundifolia</i>		<i>Sophora tetraptera</i>	158
	132	<i>Storax</i>	160
<i>Prunus ilicifolia</i>	133	Wilson's	159
<i>triloba plena</i>	133	<i>Styrax officinalis</i>	160
<i>Punica Granatum</i>	134	Wilsonii	159
<i>Pyracantha atalantioides</i>		Syrian Ketmie	90
	136	<i>Syringa</i>	128
<i>coccinea</i>	135	Rose	128
<i>Gibbsii</i>	136		
<i>Rogersiana</i>	136	Tassel Bush	86
<i>yunnanensis</i>	136	Tea Plant	45
		Tree	104
<i>Quince, Japanese</i>	68	<i>Teucrium fruticans</i>	160
		Tree, Chaste	165
<i>Raphiolepis Delacouri</i>	137	Tea	104
<i>indica</i>	136	<i>Tricuspidaria dependens</i>	162
<i>Raphithamnus cyanocarpus</i>		<i>lanceolata</i>	162
	137		
<i>Raspberry</i>	146	<i>Verbena, Lemon-</i>	
<i>Ribes fuchsioides</i>	138	scented	107
<i>laurifolium</i>	138	<i>triphylla</i>	107
<i>speciosum</i>	138	<i>Veronica Hulkeana</i>	163
<i>viburnifolium</i>	138	<i>Viburnum japonicum</i>	164
		macrocephalum	164
<i>Sabia latifolia</i>	148	odoratissimum	164
<i>Schumanniana</i>	149	<i>rhytidophyllum</i>	165
<i>Sage, Jerusalem</i>	128	<i>Vitex Agnus-castus</i>	165
<i>Salvia Grahamii</i>	149		
<i>Shrubby Buplever</i>	41	<i>Weinmannia tricho-</i>	
<i>Shrubby Germander</i>	160	sperma	170
<i>Silver Bush</i>	33	<i>Winter's Bark</i>	75
<i>Sophora macrocarpa</i>	158	<i>Winter Sweet</i>	53

INDEX

CLIMBERS, HARDY AND FOR WALLS

(Synonyms are printed in italics)

Actinidia arguta	30	<i>Campsis Princei</i>	47
chinensis	30	<i>radicans</i>	47
kolomikta	31	<i>Cantua buxifolia</i>	47
polygama	31	<i>dependens</i>	47
Akebia lobata	32	<i>Carolina Moonseed</i>	65
quinata	32	<i>Celastrus articulatus</i>	52
<i>Ampelopsis heterophylla</i>	168	<i>hypoleucus</i>	52
<i>Hoggii</i>	137	<i>Loeseneri</i>	52
<i>japonica</i>	137	<i>orbiculatus</i>	52
<i>Veitchii</i>	168	<i>rugosus</i>	52
Araujia sericofera	34	<i>scandens</i>	52
Aristolochia heterophylla	35	<i>Chilean Bell-flower</i>	101
<i>moupinensis</i>	35	<i>Cissus striata</i>	169
<i>Sipho</i>	35	<i>Clematis alpina</i>	56
Asteranthera ovata	36	<i>Armandii</i>	57
		<i>campaniflora</i>	57
Berberidopsis corallina	37	<i>Flammula</i>	57
Berchemia racemosa	38	<i>florida</i>	58
<i>volubilis</i>	38	<i>glauca</i>	61
Bigelowia graveolens	38	<i>indivisa</i>	58
Bignonia capreolata	39	<i>Jackmanii</i>	59
Billardiera longiflora	39	<i>lanuginosa</i>	59
Birthworts	35	<i>macropetala</i>	60
Blue-bell Creeper	157	<i>montana</i>	60
Briar, green	154	<i>orientalis</i>	61
Hag	155	<i>patens</i>	61
Horse	155	<i>Sieboldii</i>	58
<i>Bridgesia spicata</i>	77	<i>tangutica</i>	61
Brunnichia cirrhosa	40	<i>Vitalba</i>	54
		<i>Viticella</i>	62
Campsis chinensis	46	<i>Clematoclethra integrifolia</i>	
<i>hybrida</i>	47		62

INDEX OF CLIMBERS.

Clematoclethra scandens	62	Honeysuckle, Spanish	112
Clianthus puniceus	64	Trumpet	112
Climbers, Evergreen	16	Wild	III
for Houses	17	<i>Hydrangea altissima</i>	93
for North Walls	21	<i>anomala</i>	93
for Trees	19	<i>integerrima</i>	94
Cocculus carolina	65	<i>petiolaris</i>	93
<i>trilobus</i>	65	<i>scandens</i>	93, 94
Coral plant	37	<i>tiliaeifolia</i>	94
Creeper, Blue-bell	157		
Virginia	168	Ivy, Common	87
Cross Vine	39	Varieties of	89
		Himalayan	89
Decumaria barbara	71	Irish	89
<i>sinensis</i>	72	Tree	89
Eccremocarpus scaber	76	Jasmine	96
Elaeagnus glabra	77	Chilean	117
Ercilla volubilis	77	Common	98
Euonymus radicans	80	Primrose	99
		Winter-flowering	97
Ficus <i>repens</i>	83	Jasminum Beesianum	97
<i>stipulata</i>	83	<i>floridum</i>	97
Fig, Climbing	83	<i>nudiflorum</i>	97
Forsythia suspensa	84	<i>officinale</i>	98
		<i>primulinum</i>	99
Glory Pea	64	<i>revolutum</i>	97
		<i>stephanense</i>	97
Hedera chrysocarpa	89		
<i>cinerea</i>	89	Kadsura japonica	99
<i>colchica</i>	89	Knotweed	131
<i>Helix</i>	88	Kowhai	158
<i>hibernica</i>	89	Kudzu Vine	133
Holboellia coriacea	92		
<i>latifolia</i>	92	Lapageria rosea	101
Honeysuckle	109, 111	Lardizabala biternata	102
Early Dutch	112	Lathyrus grandiflorus	103
Etruscan	109	<i>latifolius</i>	103
Giant	110	<i>pubescens</i>	102
Late Dutch	112	<i>rotundifolius</i>	103

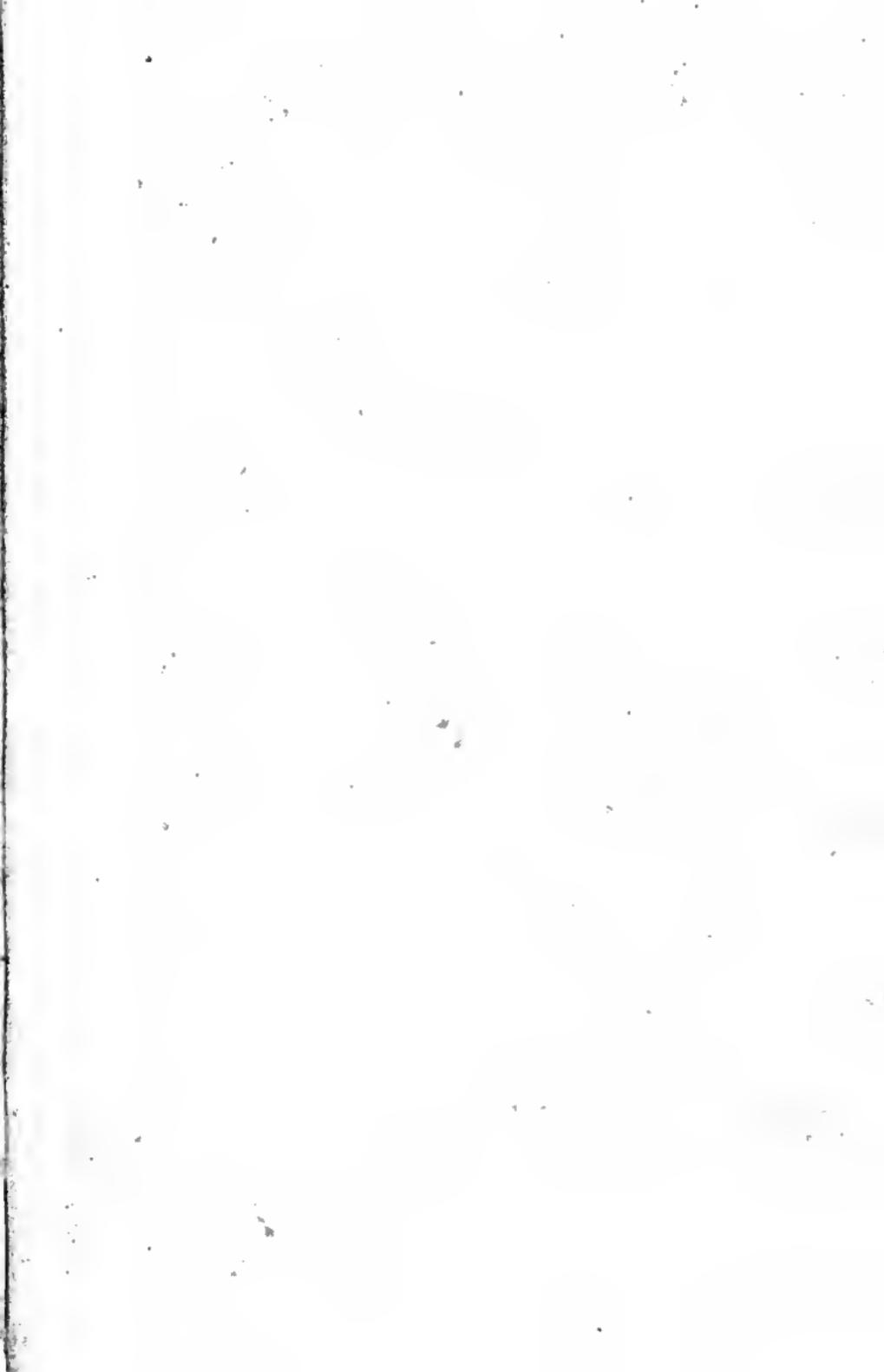
INDEX OF CLIMBERS

<i>Lonicera americana</i>	110	<i>Pea, Everlasting</i>	103
<i>Brownii</i>	108	<i>Persian Everlasting</i>	103
<i>Caprifolium</i>	109	<i>Periploca graeca</i>	127
<i>Delavayi</i>	108	<i>Physianthus albens</i>	34
<i>etrusca</i>	109	<i>Pileostegia viburnoides</i>	129
<i>fuchsiodes</i>	108	<i>Poison Ivy</i>	137
<i>grata</i>	110	<i>Polygonum Aubertii</i>	132
<i>Henryi</i>	109	<i>baldschuanicum</i>	131
<i>Hildebrandiana</i>	110	<i>Pueraria Thunbergiana</i>	133
<i>hirsuta</i>	108		
<i>italica</i>	110	<i>Rhus Toxicodendron</i>	137
<i>japonica</i>	110	<i>Rhyncospermum</i>	161
<i>Periclymenum</i>	111	<i>Rosa arvensis</i>	139
<i>plantierensis</i>	108	<i>Banksiae</i>	139
<i>punicea</i>	108	<i>bracteata</i>	140
<i>semperfivrens</i>	112	<i>Brunonii</i>	140
<i>splendida</i>	112	<i>gigantea</i>	141
<i>Tellmanniana</i>	113	<i>hemisphaerica</i>	141
<i>tragophylla</i>	113	<i>laevigata</i>	142
		<i>setigera</i>	142
		<i>sulphurea</i>	141
<i>Mandevilla suaveolens</i>	116	<i>Wichuraiana</i>	141
<i>Marsdenia erecta</i>	117	<i>Rose, Ayrshire</i>	139
<i>Menispermum canadense</i>	118	<i>Banksian</i>	139
<i>dauricum</i>	118	<i>Cherokee</i>	142
<i>Metaplexis japonica</i>	118	<i>Climbing</i>	143
<i>Stauntonii</i>	118	<i>Macartney</i>	140
<i>Mitraria coccinea</i>	120	<i>Musk</i>	140
<i>Moonseed</i>	118	<i>Pillar</i>	145
<i>Carolina</i>	65	<i>Sulphur</i>	141
<i>Muehlenbeckia compressa</i>	120	<i>Rubus australis</i>	146
		<i>bambusarum</i>	146
<i>Mutisia Clematis</i>	121	<i>flagelliflorus</i>	147
<i>decurrens</i>	121	<i>Henryi</i>	147
<i>ilicifolia</i>	122	<i>hupehensis</i>	147
<i>retusa</i>	122	<i>laciniatus</i>	147
		<i>lineatus</i>	147
<i>Parrot's Bill</i>	64	<i>omeiensis</i>	147
<i>Passiflora coerulea</i>	126	<i>Parkeri</i>	148
<i>Passion-flower</i>	126	<i>Playfairianus</i>	148

INDEX OF CLIMBERS

<i>Rubus polytrichus</i>	148	<i>Trachelospermum divar-</i>
<tricolor></tricolor>	148	<i>icatum</i>
<i>Ruscus androgynus</i>	152	<i>jasminoides</i>
		<i>Traveller's Joy</i>
<i>Sargentodoxa cuneata</i>	149	<i>Tripterygium Forrestii</i>
<i>Schizandra chinensis</i>	150	<i>Trumpet Creeper</i>
<i>Henryi</i>	150	
<i>pubescens</i>	151	<i>Vine, common grape</i>
<i>rubriflora</i>	151	<i>cut-leaved</i>
<i>sphenanthera</i>	151	<i>dyer's grape</i>
<i>Schizophragma hydran-</i>		<i>Kudzu</i>
<i>geoides</i>	93	<i>parsley</i>
<i>hydrangeoides</i>	152	<i>Virginia creeper</i>
<i>integrifolia</i>	152	<i>Vitis aconitaefolia</i>
<i>Semele androgyna</i>	152	<i>amurensis</i>
<i>Senecio scandens</i>	153	<i>arborea</i>
<i>Silk Vine</i>	127	<i>armata</i>
<i>Sinofranchetia chinensis</i>	153	<i>Coignetiae</i>
<i>Sinomenium acutum</i>	154	<i>Davidii</i>
<i>Smilax aspera</i>	155	<i>flexuosa</i>
<i>hispida</i>	155	<i>Henryana</i>
<i>megalantha</i>	155	<i>inconstans</i>
<i>rotundifolia</i>	155	<i>megalophylla</i>
<i>Solanum crispum</i>	156	<i>quinquefolia</i>
<i>"Glasnevin variety"</i>	156	<i>serjanifolia</i>
<i>jasminoides</i>	156	<i>striata</i>
<i>Sollya Drummondii</i>	157	<i>Thomsonii</i>
<i>heterophylla</i>	157	<i>vinifera</i>
<i>parviflora</i>	157	<i>vitacea</i>
<i>Stauntonia hexaphylla</i>	159	
<i>Supple Jack</i>	38	<i>Wistaria chinensis</i>
		<i>floribunda</i>
<i>Tecomia grandiflora</i>	46	<i>frutescens</i>
<i>radicans</i>	47	<i>macrostachya</i>
<i>Trachelospermum asia-</i>		<i>multijuga</i>
<i>ticum</i>	161	<i>venusta</i>
<i>crocostomum</i>	161	<i>Woodbine</i>
		<i>107</i>







CHISWICK PRESS





CENTRAL ARCHAEOLOGICAL LIBRARY,
NEW DELHI

Issue Record

635.9/Bea (190)

Gardens
Plan & Title